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National Petroleum News

News From Oil Industry Everywhere

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Roeser Hits "Gas" Buyers For Low Price

N. P. N. News Bureau

WASHINGTON, Jan. 17. — A study of the extent to which bad practices prevalent in the marketing branch are responsible for the present ills of the oil industry was launched here today, by a newly appointed committee of the Independent Petroleum Assn. of America.

It is understood the committee will make calls at various government departments, including the Federal Trade Commission, before announcing any program.

The work of this committee is a part of the broad program upon which the association launched, following its annual meeting in October in Tulsa, to protect the interests of independent producers, who make up its membership. This program is carrying the association outside of strictly production problems, because its officers feel that, while the producers have put their own house in order, they suffer from unsound economic practices carried on by other branches and interests in the oil industry.

The IPAA marketing practices committee, created by the association's Special Study Committee of 36 at a meeting in Fort Worth in December, consists of Charles F. Roeser, independent producer of Fort Worth, president of the association as chairman; John M. Lovejoy of New York, president of the Seaboard Oil Corp.; Paul G. Blazer of Ashland, Ky., president of the Ashland Refining Co.; Walter A. Jones of Pittsburgh, president of the Plymouth Oil Co.; B. L. Majewski of Chicago, vice president of Deep Rock Oil Corp.

Three Duties

The large committee assigned three specific duties to the marketing committee. One was to determine the cost of and time required to make a study of the refining and marketing branches of the industry and to determine the effect of practices in those divisions upon the producing division. The study, should it be authorized, would be made by an agency outside the oil industry.

A second task was to in-

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HIGHLIGHTS OF THE NEWS

WASHINGTON—Rail oil rate hike asked in Southeast. Page 21.

TULSA—Refiners say demand slow for new third grade. Page 26.

LOS ANGELES — One-day shutdowns adopted in Long Beach field. Page 27.

CLEVELAND — Court holds station equipment is 'movable.' Page 29.

MILWAUKEE — Schuh defends his position on narrower margins. Page 25.

MT. PLEASANT — Michigan proration bill drafted. Page 28.

TULSA — Tightening proration laws urged by Kansas and Oklahoma governors. Page 27.

Fuel Oil Tax Tops Congress Oil Bills

N. P. N. News Bureau

WASHINGTON, Jan. 17. — Taxes and more government regulation was the theme of most "oily" bills introduced during the second week of Congress.

For the most part these measures, like many of those of the first week, could be classed as "perennial" bills, which are introduced each session, with but few making the grade. They have their momentary flash of news prominence when introduced and then are referred to committee where many slumber undisturbed until adjournment.

Overshadowing in general importance all other legislative developments so far, however, has been the growing independent spirit of Congress, its back-stiffening against "musts" coming from the White House.

Another Fuel Oil Tax Bill

About the "oily" bills — another bill to tax fuel oil three cents a gallon was put in by Rep. Kee, W. Va., as a companion measure to a similar proposal by Sen. Neely, W. Va., on the senate side.

The National Coal Assn., which probably wasn't displeased over introduction of the fuel oil tax bills, came out with a statement giving its blessing to the bill of Rep. Joe Smith, W. Va., to raise the oil import tax to 3 cents per gallon, contending that the present 0.5-cent tax is "inadequate" to keep out foreign oil.

The Smith oil import tax bill will also be backed by the Independent Petroleum Assn. of America, it was indicated by Russell Brown, general counsel of the producers association.

Exemption from the federal gasoline tax for alky-gas is proposed in a bill by Rep. Harrington, Iowa, who has also introduced a House version of the Gillette Bill for oil marketing divorcement.

Rep. Daly, Pa., has put in a pipeline divorcement bill.

The Connally "Hot" Oil Law was attacked as an instrument of "monopoly" by Rep. Coffee, Wash., who introduced a bill to repeal it now without waiting for its expiration in June.

Taking cognizance of the courts' dismissal of indictments under the 1937 "hot" oil law, Sen. Connally, Tex., told NATIONAL PETROLEUM NEWS that, when he introduces a bill to make the law permanent, he would make certain it has no loopholes.

Rep. Dirksen, Ill., proposes

State Legislatures Swing Into High Gear on Oil Bills

N. P. N. News Bureau

CLEVELAND, Jan. 17. — Western state legislatures are going to grind out much legislation of concern to the oil industry, if the number of bills being introduced is any indication.

Colorado has nearly a dozen bills to regulate trucking, some of them specifically aimed at tank trucks, including Sunday-and-holiday bans on trucks using the highways and regulation of drivers' hours, both for commercial and for-hire trucks.

First gasoline grading bill also made its appearance in Colorado. while the initial proposal for an oil probe was in Wyoming, where it is proposed to have a legislative commission investigate the marketing of gasoline, looking toward the state's entry into the business.

Nebraska, anxious to join the ranks of oil producing states, has a bill in its unicameral (one-house) legislature raising the reward offered for the first producing well from $15,000 to $75,000. Reports are that at least one Mid-Continent producer is hot after the prize and has already spudded in.

Bills for severance taxes have been introduced in California and Oklahoma — 10 per cent and 2 per cent, respectively. In both states, it is proposed to use the proceeds to finance old-age pensions.

Arkansas has a proration bill which is said to embrace the good points of oil and gas conservation laws in other states which control crude production.

Good news for Minnesota dealers, if the bill passes, is the proposal before the Gopher state legislature to increase from one-third to two-thirds the dealer's share of the credit on the 3 per cent allowance for evaporation losses in handling gasoline.

In Indiana, there is a bill to repeal the tire and weight taxes.

Chain-store taxes have been introduced in a number of states.

Bills about the gasoline tax have been introduced by the dozen, with some proposing increases and, a few, decreases; others propose sharing the 'gas' tax receipts with cities and towns.

For summarized details of state bills introduced see NPN's Log on State Legislation, beginning on Page 19.

that the U. S. Bureau of Public Roads be given authority to negotiate with the states for uniform highway safety regulations, including size and weight restrictions for trucks.

Hearings start Jan. 24 on the Lea railroad "relief" bill embodying basic recommendations of President Roosevelt's railroad committee. Truckers say that the generalities of the bill disguise an intent to "hamstring" competing forms of transportation for the benefit of the railroads.

Superhighways Back

Superhighways are back in the news. Spurred on by President Roosevelt's hint that such roads might be worthy of consideration as part of the national defense program, several of last year's bills have been dusted off and introduced.

Another road bill of interest to Oil is the Kerr Bill allotting 50 per cent of federal-aid funds for secondary or "feeder" roads, which are generally improved with road oil, bituminous surfacing and similar materials supplied by the oil industry.

A bill to have the Army and Navy amass a "stock pile" of materials essential to national defense might be construed to cover petroleum products; it might also embrace the proposal of Texas Railroad Commissioner Thompson that the War Department buy up stored crude, or, to go a step further, the government's acquiring underground oil reserves.

Sen. Barkley, Ky., has dropped in a bill for federal-state co-operation to solve the pollution problem.

For summarized details of these, and other bills — federal and state — of interest to the oil industry, see NPN's Log on Oil Legislation, Page 19, a new feature for readers.

Socony Buys Freedom Retail Property

NEW YORK, Jan. 12. — Socony-Vacuum Oil Co. has purchased one bulk plant at New Kensington, Pa., approximately 100 service stations in western Pennsylvania and an undetermined number of dealer contracts, estimated at over 1000, from the Freedom Oil Works, it was reported here. Purchase price was not disclosed.

A spokesman for the company said that Socony had not purchased the Freedom refinery, or any of the company's properties in Ohio. It is understood, however, that Socony has contracted to take a portion of the output of the refinery.

New Iowa Chain-Store Tax Is Backed by Oil Jobbers

MANCHESTER, Iowa, Jan. 16.—A new Iowa chain store tax bill, sponsored by the Iowa Independent Business Men's Association, was approved by the Iowa Independent Oil Jobbers Association at a meeting for members and non-members in Des Moines last week.

Approval was given to the second draft of the proposed new chain store act, with no exemptions for any line of business. This draft carries a top bracket rate much lower than the top bracket of the first draft of the business men's association bill but a rate considerably higher than the present Iowa chain store tax law.

The proposed law, to be known as the "Iowa Community Preservation Act," would replace entirely the 1935 Iowa law that started major oil companies on a service station leasing policy. The Iowa Independent Business Men's Association sponsoring the new law is composed of wholesalers and retailers in all lines of business.

The first draft, rejected by the oil jobbers association, carried the brackets of the famous Louisiana chain store tax law, from $50 to a maximum of $3000 per store in chains of 500 or more stores.

The second draft, approved last week, was modified by the business men's association, to rates of $10 to a maximum of $550 for chains of 500 stores or more.

Units in a chain would be counted as in the Louisiana law. A chain's units all over the country would be included in determining the rate bracket, and this rate to apply to all of the chain's stores in Iowa.

The 1935 Iowa chain store tax law starts at $5 to a maximum of $155 for each unit in chains of 50 or more stores. In addition there is a tax on the gross receipts of chain stores only, starting at $25 for less than $50,000 annual gross business, to a top of $1000 tax for each $10,000 worth of gross receipts over $9,000,000 annual receipts.

'Hot' Oil Law Bobs Up Again

N. P. N. News Bureau

WASHINGTON, Jan. 16.—The Connally "Hot" Oil Act is again before Congress.

Rep. Coffee, Wash., has again introduced his bill, which received no action at the last session, to repeal the law. At the same time Sen. Tom Connally, Texas, has told NATIONAL PETROLEUM NEWS that he is drafting a bill to make the Act permanent.

In introducing his bill, which is now numbered HR 2308, Coffee said:

"The legislation has served only the monopolistic oil interests and should be repealed promptly by Congress. We should not wait even another six months to permit the independent producers, refiners and marketers to suffer thereunder. The legislation may have been designed to help these latter but from the letters reaching my office it is clear that it has placed an unbearable burden on them. Its benefits have been purely in aid of the major oil companies in their drive to monopolize the oil industry."

Although Connally has not introduced it yet, he told NPN his proposal would be to continue the law in its present form, at the same time making provision for continuance of the criminal sections.

Daily Legislative News

DAILY oil legislative developments at Washington and the state capitals (as well as other news along the oil front) are carried in OIL-GRAM NEWS SERVICE, the fast, teletype news agency for the oil industry. For sample copies and information, write Platt's Oilgram, 530 Penton Building, Cleveland.

Superhighways Interest F D R

N. P. N. News Bureau

WASHINGTON, Jan. 16. — President Roosevelt has indicated an interest in superhighways.

At a press conference several days ago the President was asked if his national defense program included any plans for roads to aid maneuverability of ordnance, ammunition and troops in various parts of the country. He replied that superhighways were gaining in popularity in Congress, and that they might be considered both from the standpoint of providing useful work for the WPA and as aids to the national defense.

The President indicated his belief that the emergency road building programs of the past several years have begun to make a dent in the local road needs of various communities and indicated that the WPA workers might easily be switched to superhighways such as have been proposed on Capitol Hill.

Only one superhighway bill (HR 1939) has been introduced in Congress so far this session by Rep. Snyder, Pa. It provides for construction of three east-west transcontinental highways and six north-south roads from border to border.

Crude Tax, State Development of Oil Are Proposed for California Pensions

N. P. N. News Bureau

LOS ANGELES, Jan. 14.—In search of additional revenue needed for an ambitious old-age pension program, California legislators have cast their eyes on the oil industry, proposing a severance tax and state-development of state oil lands.

Assemblyman Voigt has introduced a bill imposing a severance tax of 10 per cent on the value of oil at the well and five cents per thousand feet of natural gas.

Also making their appearance the past week were two proposals which, if they become law, would make the California oil industry a guinea pig in a new socialistic experiment.

One of these, introduced by Assemblyman Massion, provides for drilling of state-owned lands by the state, with "profits" from such oil development to be earmarked for old-age pensions.

The Massion Bill is apparently designed to abolish leases of state lands made to private interests under the "State Lands Act of 1938", which was passed by a special session of the legislature last March and under which leases are being drilled on some 900 acres of tidelands at Huntington Beach.

Massion's measure was referred to the governmental efficiency committee.

The other bill, sponsored by Assemblyman Yorty, provides for drilling of public lands by the state if private bids are "unsatisfactory", and specifies an annual royalty to the state from state-owned oil lands. It is before the oil industry committee in the House.

Coal Backs Bill For Higher Tax On Foreign Oil

N. P. N. News Bureau

WASHINGTON, Jan. 16. — Backed by the National Coal Assn. and Independent Petroleum Assn. of America, Rep. Joe Smith, W. Va., has introduced a bill (H.R. 12) to impose an import tax of 3 cents a gallon on crude oil and all its liquid derivatives, except lubricating oil, which it would continue to tax at the rate of 4 cents a gallon, as under present law.

Present import taxes are 0.5 cents per gallon on crude and fuel oil, 2.5 cents on gasoline, and 4 cents on lubricating oil. The bill would add a new tax of $2 per ton on asphalt, and continue the 1 cent per pound on paraffin and other petroleum wax products.

John D. Battle, executive secretary of the coal association, said, "the present rate of tax has wholly failed to check oil importations." The increase, he added, is "advocated by independent American oil producers, and so far as the oil industry is concerned, and so far as is known, is opposed only by those who are financially interested in the Central American oil fields."

"The coal industry, and the independent oil interests, though competitive in the domestic fuel market, are united in the present move against foreign oil which is hurtful to them both, and which, as we believe, is so detrimental to American labor," Battle said.

Although no formal statement came from I.P.A.A., General Counsel Russell B. Brown told NATIONAL PETROLEUM NEWS his association favored the bill.

Daly Sponsors Bill On Pipeline Divorce

N. P. N. News Bureau

WASHINGTON, Jan. 16.—A bill to divorce pipelines from oil company ownership (H. R. 2304) has been introduced by Rep. Daly, Pa. It has been referred to the House Interstate Commerce Committee.

Daly's bill provides that after Jan. 1, 1940 "it shall be unlawful for any common carrier engaged in the transportation of oil or other commodity except water and except natural or artificial gas, by pipeline, or partly by pipeline and partly by railroad or by water, to transport from any state, territory or District of Columbia to any other state, territory or District of Columbia, or to any foreign country, any article or commodity manufactured, mined or produced by it or under its authority or which it may own in whole or in part or in which it may have any interest, direct or indirect, through stock ownership, or use, interlocking directors or officials or other lawful means."

Severance Tax Of 2% Is in Oklahoma Bill

By Teletype
N. P. N. News Bureau

TULSA, Jan. 17.—Petroleum, natural gas and casinghead gas would pay a portion of the old age pension in Oklahoma under terms of a bill introduced in the legislature calling for a severance tax on all natural resources, except coal and farm products.

For petroleum and gas, the tax rate would be two per cent of the cash market value.

License would be required, the Oklahoma Tax Commission having authority to grant such license, and reports would be made monthly to that body.

This tax would be in addition to all other taxes now on petroleum in Oklahoma.

Arkansas Gets Proration Bill

By Teletype
N. P. N. News Bureau

TULSA, Jan. 17.—An oil and gas conservation bill (SB-26), apparently patterned after the best features of the conservation laws of Texas, Oklahoma and Kansas, has been introduced in the Arkansas legislature.

The bill provides for a five-man oil and gas commission, the members to be appointed by the governor.

Bill defines "waste" much in the same manner as do the laws in other southwestern states, provides for proration based on reasonable market demand, unit drilling, and the proration of allowable production among producers on a reasonable basis.

Tenders would be required for all oil produced or products made from the oil. Illegally-produced oil could be seized by the commission and sold.

Persons guilty of violating the proposed law through making false entries would be subject to a fine not to exceed $500 or six months in jail, or both. Other violations would carry a fine not to exceed $1000 a day for each day the law was violated.

NPN's Log ON OIL LEGISLATION

Summarized oil legislative information below is based on reports received at Cleveland from Washington and state legislatures, which are deemed reliable although NATIONAL PETROLEUM NEWS assumes no responsibility for accuracy or completeness of this information. Abbreviations used are: "Sen.", senator or member of the upper house of a legislature; "Rep.", representative or member of the lower house of a legislature; "Gov.", governor; "Pres.", President; "Chrmn.", chairman; "Comte.", committee; "Subcomte.", subcommittee.

Congress

Bills Introduced

US SB-495 (Capper, Kans.)
To restrict concessions granted in reciprocal trade agreements to the nations entering such agreements, retroactive to 1934, and to make all such agreements in the future subject to Senate ratification. To Finance Committee.

US S-552 (Gillette, Ia.)
To exempt from the 1-cent-per-gallon federal excise tax gasoline mixed with 7% of ethyl alcohol. To Finance Committee.

US S-572 (Thomas, Utah)
Authorizing Army-Navy Munitions Board to determine what natural resource materials are essential to national defense, and providing for purchase of "stock piles." To Military Affairs Committee.

US SB-685 (Barkley, Ky.)
Providing for federal co-operation in water pollution control. To Commerce Committee.

US SB-679 (McKellar, Tenn.)
To provide for planning a superhighway program. To Post Office and Post Roads Committee.

US HB-12 (Smith, W. Va.)
To tax imported crude, fuel oil and gasoline at rate of 3-cents per gallon. To Ways and Means Committee.

US HB-13 (Dirksen, Ill.)
To repeal Silver Purchase Act of 1934. To Ways and Means Committee.

US HB-14 (Dirksen, Ill.)
To provide that foreign trade agreements must be ratified by the Senate. To Ways and Means Committee.

US HB-15 (Dirksen, Ill.)
Giving Public Roads Bureau authority to co-operate with states in preparation of uniform road safety regulations, including truck size and weight restrictions. To Roads Committee.

US HB-2196 (Kee, W. Va.)
To tax sales of fuel oil at rate of 3-cents a gallon. (Identical with Sen. Neely's S 286). To Ways and Means Committee.

US HB-2299 (Rich, Pa.)
Establishing federal automobile and truck speed limits. To Roads Committee.

US HB-2304 (Daly, Pa.)
To divorce pipelines from oil company ownership. To Interstate Commerce Committee.

US HB-2308 (Coffee, Wash.)
To repeal the Connally "Hot" Oil Act. To Interstate Commerce Committee.

US HB-2318 (Harrington, Iowa)
To divorce marketing from other branches of petroleum industry (identical with Sen. Gillette's bill, S. 448). To Judiciary Committee.

US HB-2380 (Kerr, N. C.)
Providing that 50% of federal highway aid funds be applied to secondary and feeder roads. To Roads Committee.

US HB-2405 (Angell, Ore.)
To extend Inland Waterways Corp. activities to Columbia River. To Interstate Commerce Committee.

US HB-2531 (Lea, Calif.)
Rail relief bill generally following President's recommendations as sent to Congress. To Interstate Commerce Committee.

US HB-2556 (Scrugham, Nev.)
Same as S. 572. To Military Affairs Committee.

US HB-2559 (Harrington, Iowa)
To exempt from federal gasoline tax motor fuel mixed with 10% alcohol. To Ways and Means Committee.

US HB-2648 (Pierce, Ore.)
To make the Columbia river navigable to points further upstream, as well as Snake river in Idaho. To River and Harbors Committee.

State Legislatures

Bills Introduced

ALABAMA

HB-16, Hill.
Regulates operation of motor vehicles on highways. To Joint Ways and Means Committee.

ARIZONA

HB-36.
Reserves mineral and oil rights when state lands are sold. To Public Lands Committee.

H. Con. Res. 3
Proposes constitutional amendment permitting 20 year oil leases on state lands. To Public Lands Committee.

HB-17, Smith.
Sets up fund of $250,000 from gasoline tax for state advertising. To Printing Committee.

ARKANSAS

SB-23, Smith.
To levy additional tax of 0.125 cent per gallon on motor fuel for construction of hard surface roads. To Roads and Highways Committee.

SB-26, Mason and others.
Creates oil and gas commission for conservation of crude oil, natural gas, and products thereof. To Oil and Gas Committee.

SB-28, Smith.
Transfers 0.125 cent from gasoline tax fund to municipalities and 0.125 cent to counties when net revenue of state exceeds $11,000,000. To Roads and Highways Committee.

SB-55 and HB-78, Sampier and Leflar.
Provides chain store tax ranging from $1 to $180 per unit. To Revenue Committees in House and Senate.

HB-25, Goldman.
Declares title to oil and gas in its natural state not subject to transfer or conveyance separate and apart from lands. To Oil and Gas Committee.

HB-34, Welsenberg.
Provides 0.25 cent of motor fuel tax be turned back to counties; one half of which to go to municipalities. To Roads and Highways Committee.

HB-42, Vesey
Reduces excise tax 1c on motor fuel. To Roads and Highways Committee.

HB-35, Goldman.
To tax chain stores at rate of $50 to $250. To Revenue Committee.

CALIFORNIA

HB-420, Rosenthal.
Declares certain corporations, etc., engaged in transporting petroleum

and products for hire to be common carriers. To Public Utilities Committee.

HB-224, Andreas.
Exempts spray oil from sales tax. To Revenue Committee.

HB-216, A-218, Atkinson.
Reduces from one acre to one-third acre the amount of land necessary to drill oil well. To Municipal Corporations Committee.

HB-212, Voight
To levy 10 per cent severance tax on petroleum; five per cent on natural gas. To Revenue Committee.

HB-574, Yorty.
Provides annual royalties to state from state-owned oil and for state drilling if private bids unsatisfactory. To Oil Industry Committee.

HB-584, Massion.
Provides for state drilling for oil on state lands, abolishes leases to private companies and earmarks profits to old age pension. To Governmental Efficiency Committee.

COLORADO

SB-22, Noreiga.
To levy excise tax on natural or manufactured gas brought into and sold in Colorado. To Public Lands Committee.

SB-89, McDonald.
Prohibits vehicles carrying more than 500 gallons of inflammable petroleum from using highways from 6 a.m. to midnight Sundays and holidays, also in summer months in cities of 25,000 or more from noon Saturdays until midnight Sunday. To Motor Vehicle Committee.

HB-61, Tabor.
Establishes standards for gasoline and other motor fuels. To Agriculture and Irrigation Committee.

HB-47, Davis.
Levies tax on transportation of oil by pipelines. To State Affairs Committee.

SB-86, McDonald.
Prohibits truck operation on highways on Sundays or legal holidays. Exempts only livestock, newspaper and perishable food carriers. To Motor Vehicle Committee.

SB-87, McDonald.
Provides committee to study highway transportation problems. To Motor Vehicles Committee.

HB-89, Davis.
Companion bill to SB-87. To Appropriations Committee.

SB-101, McDonald.
Licenses motor vehicles operated by foreign owners within the state for compensation. To motor vehicles and motor transportation.

SB-102, 104, 106, McDonald.
Amends ton mile tax on commercial vehicles, to Motor Vehicle and Transportation Committee.

SB-99, McDonald.
Regulates quantity of inflammable petroleum products transported over state highways and types of vehicles to be used. To Motor Vehicle and Transportation Committee.

HB-91, Davis.
Limits hours for common carrier and commercial truck drivers. To Roads and Bridges Committee.

HB-39, Penny and Horsman.
To levy excise tax on natural and manufactured gas transported into state for sale. To Finance Ways and Means Commitee.

DELAWARE

SB-1, Simmons.
To change automobile registration date. To Building and Highways Committee.

GEORGIA

HB-25, Evans.
To limit license tax on chain store so that when only one store owned it cannot be taxed as a chain store. To Ways and Means Committee.

H.RES.-6.
Proposes constitutional amendment to increase purposes for which state taxes may be levied. To Amendments to Constitution No. 1.

IDAHO

HB-24.
To exempt from gasoline tax sales by dealers to other dealers for resale.

HB-11.
Diverts 20 per cent of state gasoline tax to counties. To State Affairs Committee.

INDIANA

HB-47, Thompson and others.
To reduce gross income tax on retailers to one-half of 1 per cent. To Ways and Means Committee.

HB-2, HB-4 and HB-6, Evans, Hunter, Hoover and others.
Repeals tire weight, tax and refund fees charged. To Roads Committee.

HB-47, Thompson and others.
Reduces gross income tax on retailers to one-half of one per cent. To Ways and Means Committee.

SB-16, Dill.
Repeals truck weight tax and reimburse those taxed under law. To Roads Committee.

KANSAS

HB-5, Plummer and Jones.
Provides for chain store tax from $10 to $550 per unit; exempts petroleum retail outlets.

HB-00, McDonald.
Provides for fair trade practices and prohibiting price discrimination.

HB-00, Woods.
Restores gasoline tax exemption permit for purchase of fuels used in farm operations.

HB-9, Buzick and Plummer.
Provides for regulation and licensing of core drilling in oil and gas exploration.

MAINE

SB-43.
Chain store tax. To Taxation Committee.

MASSACHUSETTS

HB-493.
Provides for payment to municipalities of portion of highway fund for local highway projects to relieve unemployment. To Joint Ways and Means Committee.

HB-486.
Establishes a retail sales tax. To Taxation Committee.

HB-416, Long.
Relative to the sale of gasoline and other motor fuel. To Taxation Committee.

HB-574.
Provides for payment of part of state gasoline tax to City of Boston. To Joint Ways and Means Committee.

SB-68.
Providing for distribution to cities and towns of part of proceeds of gasoline tax. To Joint Ways and Means Committee.

MINNESOTA

SB-24, Berg.
Changes credit allowance for evaporation losses so that dealer receives two-thirds instead of one-third of total 3 per cent allowance. To Motor Vehicles Committee.

SB-49, Gage and others.
Defines, regulates and licenses itinerant merchants who transport goods by truck. To Public Welfare Committee.

MONTANA

HB-1010, Brown and McCarthy.
Provides greater security for payment of wages by refiners and drillers except such employers who have title to not less than one-half interest in the fee of property being worked.

NEBRASKA

NO.-32, Reaves.
Increases from $15,000 to $75,000 reward for discovery of oil in Nebraska.

NO.-6, Herrick.
Reimburses dealer's part of tax paid on alcohol blends which is not used for operation of motor vehicles and provides separate signs for such dealers.

NEW YORK

SB-105, Wicks.
Changes date for motor vehicle registration to April 1, ending with March 31. To Motor Transportation Committee.
Same as NY HB-2.

SB-45, Mrs. Graves.
Same as SB-105 above.

NORTH DAKOTA

SB-26, Tax Laws Commission.
Imposes 2% tax on tangible personal property purchased at retail for storage or consumption. To Tax and Tax Laws Committee.

OHIO

HB-11, Hudlett.
To exempt fuel (and certain other necessities) for home consumption from 3 per cent retail sales tax.

OKLAHOMA

SB-34, Spencer.
To extend Interstate Oil Compact. To Oil and Gas Committee.

H. RES.-10, Eaver.
Memoralizing Congress to pass Patman chain store tax bill. To Revenue Taxation Committee.

HB-135, Committee on Oil and Gas.
To levy one eighth cent per barrel excise tax on crude oil; to be credited to conservation fund.

HB-50, Meyers, McVickers, Worthington, Mears, Houston and Paul.
Provides for 2 per cent severance tax on petroleum.

HB-118, Barr.
Exempts tractor gasoline and gasoline used highway department trucks from payment of state gasoline tax, such gasoline to be colored black.

HB-62, Witt.
To repeal motor vehicle mileage tax. To Revenue and Taxation Committee.

HB-96, Sweeney.
Provides for chain store tax.

RHODE ISLAND

HB-525, Miller.
Reduces state gasoline and other motor fuel tax from 3 to 2 cents per gallon. To Committee on Finance.

SOUTH DAKOTA

SB-10, Heck.
Requires trucks to carry two flares between sunset and sunrise. To Highways Committee.

TENNESSEE

SB-134, Bean.
To reduce state gasoline tax 2 cents from 7 to 5 cents.

TEXAS

SJ RES.-5, Sulak.
Constitutional amendment providing 2 per cent sales tax and $15 old age pension. To Constitutional Amendment Committee.

SB-23, Roberts.
Regulates motor carriers. To Highway Motor Traffic Committee.

SB-4, Small and Pace.
Re-enacts oil and gas conservation laws which expire Sept. 1, 1939.

SB-1, Kelley.
Fixes net load limit for trucks based on tires, brakes and general mechanical condition.

SB-2, Kelley.
Fixes net load limit outside of cities at 12,000 lbs. on two-axle basis; 20,000 lbs. on basis of three axles or more.

HB-00, Bradbury.
Protests inequitable rail rates in southwest and petitioning Congress for relief.

SB-00, Small.
Proposes new gas conservation law forbidding drainage as well as wastage of gas.

WYOMING

H.RES.-2, Zeiher.
Provides for legislative investigation of the sale of gasoline, looking to entry of state into business. To Committee Nine.

WASHINGTON

SB-19, Lovejoy and Ferryman.
Establishes minimums for petroleum and gas leases of state lands. To State Lands Committee.

SB-20, Lovejoy and Ferryman.
Establishes minimums for petroleum and gas leases of state lands. To State Lands Committee.

SB-20, Lovejoy and Ferryman.
Requires $100 permit to drill for oil or gas. To State Lands Committee.

Oil's WASHINGTON CALENDAR

Below are given the dates and notices of hearings, proceedings, new legislation, etc., which are of importance to oil companies. Notice is also given of regulations issued, interpretations of laws, new publications, etc., with information as to how readers may secure official copies of these.

HEARINGS:

Interstate Commerce Commission:

Feb. 20—First of series of hearings on question of need for safety regulation for private truckers (Washington). Further hearings as follows:

Feb. 23—New York.
Feb. 27—Chicago.
March 2—Minneapolis.
March 6—Spokane.
March 8—Portland, Ore.
March 13—Los Angeles.
March 17—Omaha.
March 20—Memphis.

Jan. 19—Rail rates on petroleum products from Wyoming and Montana refinery points to Dakota and Minnesota points. (Billings, Mont.)

Jan. 21—Rail rates on petroleum products from Wyoming and Montana refinery points to Idaho, Washington and Oregon points. (Billings, Mont.)

Securities Exchange Commission:

Jan. 24—N. Y. Stock Exchange request to eliminate listing of common stock of Colonial Beacon Oil Co.

Federal Power Commission:

Jan. 27—Texas Gas Utilities Co. application for authority to export natural gas from Texas into Mexico.

FINAL DATE FOR FILING OF BRIEFS:

Interstate Commerce Commission:

Feb. 1—In matter of proposed crude oil pipeline rate reduction.

EFFECTIVE DATE OF RULINGS:

Interstate Commerce Commission:

Jan. 31—"Hours of Service" regulations for drivers of for-hire trucks into effect.

MEETINGS:

Feb. 2—Fourth annual conference, Conservation Branch of Geological Survey (Salt Lake City, Utah).

REPORTS AVAILABLE:

"Survey of Fuel Consumption at Refineries in 1937," by G. R. Hopkins, assistant chief economist, Petroleum Economics Division, U. S. Bureau of Mines, Washington.

"Typical Oil-Field Brine-Conditioning Systems Preparing Brine for Subsurface Injection," by Sam S. Taylor, C. J. Wilhelm, and W. C. Holliman, petroleum engineers, Bartlesville station, U. S. Bureau of Mines, Washington.

Rails Ask Rate Cut On Oil in Southeast

N. P. N. News Bureau

WASHINGTON, Jan. 16. — Railroads in the Southeastern States have asked the Interstate Commerce Commission for permission to reduce again their rates on gasoline, kerosine and fuel oil to meet truck and barge competition on movements inland from marine terminals.

In their rate application (FSA 17624) to the ICC, the rails make no bones about the fact that they want not only to "deter shippers from contracting with trucks, or purchasing and using their own trucks, but with respect to the traffic already lost, they must be able to induce shippers to return to the railroads a share of this traffic." Reference is also made to competition from "unregulated water carriers."

A temporary order giving ICC permission for establishment of the new rates, pending a hearing, was asked.

The new rates would be based on a downward revision of the existing truck-competitive scale from seaboard terminals to inland destinations in Virginia, the Carolinas, Georgia and Florida.

In general, the new mileage scale would provide for a charge of a tenth of a cent a mile per hundred pounds — over direct routes; that is, 15 cents per 100 pounds for 150 miles, or 19 cents per 100 pounds for 190 miles.

But there are variations of this scale where port relationships must be maintained.

In addition, exceptions for "class rate circuity" will allow the scale charges to be applied over longer circuitous routes between the ports and destinations to which there is a direct route. For instance, to a point lying 150 miles from one of the ports by a direct line, the scale rate is 15 cents per hundredweight. Over a circuitous route to the same point, the same charge may be made although the route may cover up to 280 miles. The circuity rule is not applicable unless a direct route to the destination exists.

Scales Compared

Comparison of present and proposed mileage scales, follows:

Distance (miles)	Present rate (Cents per 100 pounds)	Proposed rate (Cents per 100 pounds)
Up	5 5	5
50	6.5	5
60	7 5	6
75	9	8
85	10	9
95	11	10
100	12	10
110	13	11
150	18	15
200	24	20
250	30	25
300	36	30
350	42	37
360	43	39
370	45	41
*380	46	43

*Scale rates applicable only up to 380 miles from ports.

Specific ports from which it is proposed the new rates shall apply, with the area to be served from each, as outlined in the application, were:

Hopewell, Va., Newport News, Va., Norfolk, Va., Portsmouth, Va., and Richmond, Va. to North Carolina destinations.

Wilmington, N. C., to Augusta and Elberton, Ga., to South Carolina destinations, and North Carolina destinations over interstate routes.

Charleston, S. C., to destinations in Georgia and South Carolina over interstate routes.

Savannah, Port Wentworth and Brunswick, Ga., to Georgia destinations over interstate routes and destinations in North Carolina and South Carolina.

Jacksonville, Panama City and St. Marks, Fla., to Florida destinations over interstate routes and destinations in Georgia.

The proposed rates are to be applicable only to those points "which have facilities for handling tank car loads," with higher rates being maintained for other points—a technical departure from the fourth section of the Interstate Commerce Act which provides that rates for longer hauls shall not be less than a combination of rates for shorter hauls over the same routes and in the same direction without ICC authority.

The application only seeks "authority" to publish the rates, of course, and there is nothing mandatory upon the rails to publish them all, even when and if authorized. It is expected that, where even lower "competitive" rates than those provided in the scale and other relationship factors now exist, they will continue in effect.

Exemplary of these are the 10.5 cent rates granted by temporary orders from Savannah and Charleston to Augusta, on the plea of the rails that barging on the Savannah River, and trucking from Augusta, curtailed their revenues. Prior to the cut, the rate was 17 cents.

History of Rates

Excerpts from the application at ICC give the history of southeastern rail rates, and reasons for the relief sought, as follows:

"The gasoline, kerosine and fuel oil traffic is very important to the rail carriers from a tonnage and revenue standpoint. The history of the carriers' efforts to regain some of the gasoline and kerosine traffic lost to motor trucks and to prevent further loss of such traffic (is presented briefly herewith). . .

"Prior to Aug. 15, 1935, there was no full line of truck competitive rates on gasoline and kerosine between (points named above). Effective on that date, because of the severe competition encountered from tank trucks, rates much lower than normal were established within a radius of 270 miles of the ports (in Docket 17000, part 4). . .

"However, under those rates, the rails continued to lose traffic, and on August 31, 1936, based on a distance scale up to 370 miles distant were established (by Fourth Section Order 12741).

"While the present truck competitive rates (for fuel oil) are not so extensive in scope . . . the increasing use of that commodity makes necessary the same treatment under the proposed revision. . .

"Tank truck competition is mostly from contract carriers, and is particularly difficult to cope with inasmuch as the charges are variable and flexible, being subject to the jurisdiction of the commission only to the extent that certain minimum charges must be observed."

The application cites that competition on intrastate hauls is even worse than that from interstate carriers (and often an intrastate trucker competes with a railroad whose haul must be interstate because of the route), because there is "little or no regulation of such (contract) trucks in the states involved," adding:

"The competition encountered from unregulated water carriers at inland points accessible by water . . . and to other points in conjunction with tank trucks have also made great inroads into the rail carriers' revenues from this traffic. . . .

"Your applicants' present need for revenue is so acute that they cannot stand idly by and continue to lose this business . . . . also point out that unless relief is granted without delay, their routes will be placed at a disadvantage, because it is expected that publication of rates on intrastate traffic will be proceeded with without undue delay."

Seeks Rate Suspension

WASHINGTON, Jan. 16. — The Interstate Commerce Commission has before it a petition filed by National Petroleum Carriers, Inc., asking that it suspend and investigate tariffs filed by the Pennsylvania Railroad calling for reduced rates on petroleum products from Baltimore to Pennsylvania destinations.

The proposed rates, petitioners argue, would result in a heavy loss of revenue to the railroads without resulting in the recapture of sufficient gallonage from the trucks to offset the loss.

NPN Three Months Ahead!

Southeastern railroads' plans for further reductions in oil freight rates were first disclosed in NATIONAL PETROLEUM NEWS of Oct. 12, 1938, on Page 15. Samples of the proposed new rates, given in the NPN article three months ago, were the same as those include in the rails' application just filed with the ICC.

New Southeastern Rail Rates Compared

WASHINGTON, Jan. 16.—Here are some samples of proposed interstate rates on gasoline, kerosine and fuel oil moving from South Atlantic ports inland. Where both the origin and destination points are in the same state, it means that route involves the crossing of a state line, perhaps a "circuitous" route, but is indicative of the scale of intrastate rates which the railroads will shortly file with the respective state rail-regulatory bodies.

(Cents Per 100 Pounds)

	Miles	Present Rate	Proposed Rate
From Richmond, Va., to			
Greenville, N. C.	149	19	10
Raleigh, N. C.	157	15	13
From Hopewell, Va., to			
Charlotte, N. C.	289	29	25
Rocky Mount, N. C.	106	13	11
From Norfolk Group to			
Elizabeth City, N. C.	44	11	9
From Wilmington to			
Asheville, N. C.	330	40	29
Charlotte, N. C.	189	22	16
Fayetteville, N. C.	83	22	*7
Goldsboro, N. C.	84	10	9
Raleigh, N. C.	133	14	12
Winston-Salem, N. C.	208	22	18
Columbia, S. C.	192	24	20
From Charleston to			
Charlotte, N. C.	220	24	18
Aiken, S. C.	120	14	12
Greenville, S. C.	240	29	24
Orangeburg, S. C.	80	10	8
From Savannah and Port Wentworth to			
Asheville, N. C.	306	39	27
Anderson, S. C.	228	28	23
Columbia, S. C.	140	17	13
Greenville, S. C.	250	30	25
Saluda, S. C.	169	20	17
From Brunswick to			
Athens, Ga.	292	36	30
Atlanta, Ga.	275	32	25
Macon, Ga.	187	23	19
Waycross, Ga.	60	7.5	6
From Panama City to			
Albany, Ga.	164	20	17
Moultrie, Ga.	173	21	18
Columbus, Ga.	221	28	†25
Valdosta, Ga.	188	23	19
Tallahassee, Fla.	128	17	13
Chattahoochee Riv., Fla.	88	..	‡9

*Rates to Fayetteville made lower arbitrarily because of barging up Cape Fear River from Wilmington.

†2 cents over scale to clear intermediates.

‡Fuel oil only.

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To The Blue Denim Army In Its Best Fight for Profit

By WARREN C. PLATT, Editor

The men in the blue denim coveralls are the largest army of oil men who have the opportunity to use sales effort to bring into the oil industry's till more dollars and to put profit on its balance sheet.

These men only DELIVER the gasoline but they actually SELL everything else the station offers in engine oil, lubrication jobs, oil cleaners, tires and batteries and all the other accessories and services which every motorist NEEDS at some time; but he may not think he needs any of them when he stops for gasoline.

When the motorist pulls up at the gasoline pump that sale of the gasoline has been completed. The motorist has already decided on his need for the gasoline, his preference as to brand and station and he has also accepted the price, if he has given price any thought at all. All that the station attendant can possibly do is to increase the number of gallons the motorist may have intended buying and then so handle the delivery of the gasoline as to continue the favorable impression the motorist showed he had of that brand and station by driving into it in the first place.

What else the motorists buys depends solely upon the attendant in the Blue Denim Uniform.

Watching that man in the Blue Denim are a few million people, way back to the farmers who draw the royalty, the producers, the pipeline and refinery men, all the equipment men over the country and their families, those above him in his own company, his president, his vice presidents of production, pipeline, refining and, particularly, his vice president in charge of marketing. On this last named is the responsibility for training this Man in Blue Denim to see that what next he does, when the gasoline buyer drives to his gasoline pump, brings some much needed extra money and profit to the company and all the few millions of people behind him who are watching.

The thought in all minds will be, will the Blue Denim Salesman remember to say this and to do that? Did his supervisor properly emphasize the latest sales approach? Did the sales manager issue that order for the steenth time that all stations be extra-checked for cleanliness and full equipment that they may properly impress the gasoline buyer so he will listen more attentively to the man in Blue Denim? Will that private in the vast Blue Denim Army think to point to that new and efficient lubrication equipment that will prove cheap, if the Blue Denim man uses it, but mighty dear if he does not? Will he use the new sales talk on which so much time and money has been spent? Will he try to cash in on all the dollars and hours spent on advertising and merchandising training?

If the Blue Denim man does a good job he will sell a big increase of millions of dollars in all lubricating products, for nearly all cars are under-lubricated.

If he does a good job he will get a fair price with a profit in it for all these watching people, way back to the well.

If that Blue Denim man uses all the aids that have been given him, he will make his own operations more profitable, even if his gasoline margin is narrow.

If he gives the "lubes" and the accessories the right push he will materially lift the expense burden which gasoline as the big volume product has to carry today.

And if the Blue Denim Army does the right kind of a job, the motorist will drive away to enjoy many more miles of pleasurable travel at a lower cost per mile by reason of a car maintained in better and safer condition.

And if the oil industry's patrons so depart from our gasoline pumps and lubritoriums they will be pleased and satisfied customers, the kind who will think and speak well of our industry and not do it political wrong, if the facts are given them.

So, on behalf of the millions of oil people who are watching and on our own behalf too, for we also must look to the Blue Denim Army for whatever success may be ours in this world, we offer this issue in aid of and in compliment to the good work of the men of the Blue Denim Uniform.

In this issue they will find, we know, much of interest and of value to them, facts that will help them at that critical moment as they stand before the gasoline customer as salesmen for the oil companies' other products and services. And also in this issue are facts that should be of aid to the Blue Denim Man's superiors, in their efforts to help him make more sales and at better prices.

In addressing this issue to Blue Denim, we also salute the men uniformed in Khaki, White Duck, in Leather Jacket or in Breeches and Puttees. The Blue Denim is but a symbol of the workers on the sales line, that is easy to reproduce on that great educational machine, the American printing press.

Regardless of Uniform, regardless of brand or station, here's our best wishes and help for the best profit lubrication year in the oil industry's history.

Can't Get Profitable Prices By Studying Cut Price Signs

Even the weather man has done a great job to help the oil industry this winter by furnishing some of the mildest and Springiest winter weather we have had in years. When by all the rules of the almanac, blizzards and zero temperatures should be raging, the ordinarily snow-bound north has enjoyed good golf weather.

This open winter up north in the area of greatest gasoline consumption, with crude and gasoline stocks down, and an increased demand estimated for 1939, gives every promise for oil industry profits.

However, profits are largely dependent on fair prices and

they in turn on the thinking of the individual oil man. That man must think of getting business at better prices than by cutting prices.

Cutting prices has little to do with increasing consumption of gasoline. It only takes business away from a competitor and makes for losses. Gasoline consumption is dependent entirely on the use of the automobile and the extent of that use, in the main, is outside the control of the oil industry. No amount of oil industry advertising, or other sales effort, nor any cut price that the industry ordinarily makes, will materially affect the use of their cars by the vast majority of car owners. The oil industry has a volume of consumption that is steady and most substantial and which is only dependent on good quality and fair prices and services, which the industry gives.

All this should make for stable and profitable prices.

But most oil marketers and dealers seem to lose sight of this underlying fact and go cutting each other's prices as if they were increasing their market, whereas all they can possibly do is bring losses to themselves and to their competitors.

Further faulty thinking of most marketers and dealers seems to be that, once they are launched in the oil business, some constitutional "right" insures them a profitable volume of business, and that same "right" should insure them a good increase every year.

The boom years of big increases in gasoline consumption passed long ago. From now on, as in the last few years, the per cent of increase each year will be relatively small, perhaps not any as is probable for 1938. Therefore, in gauging one's business, a marketer or dealer, in the main should figure that any increase he gets above the average increase for his territory, is going to come out of some competitor's volume.

Then the marketer who gains this gallonage should pause to study what the marketer who has lost it is going to do? Is that marketer going to sit quietly and twiddle his thumbs or is he going to get that business back if he can? How is he most likely to try and get it back? Probably by cutting the price, figuring, and generally correctly, that the business was gotten away from him by a cut price in the first place.

Major companies are often quite prone to overlook this natural result when they go grabbing their competitor's gallonage. However, the majors are by no means the only offenders, as their files are full of sales tickets of cut prices of their smaller competitors and of retailers.

After the industry has enjoyed good business and good prices and profits for a few years, it starts in on a price cutting spree that is partly the result of careless thinking on the part of many as to the fundamental conditions of the industry. The cutting goes on until everyone is studying red ink figures. Then enough of them come to their senses to look at the statistics, see that conditions have been improving, often times for months. Then some courageous one gets up a little spunk and tries going after better prices. Eventually others discern "leadership" and raise their prices.

This is not to argue that fundamental conditions of supply and demand in the industry can be disregarded in the price policy of the individual companies, but it is to argue that correction of and improvement in those fundamental conditions are so frequently overlooked while the spree of price cutting and gallonage stealing continues.

We believe that the oil industry today is paying more attention to the other man's cut price and is overlooking the general improvement in the industry's basic conditions which would seem to justify an end to the price cutting and to warrant the establishment of fair prices by all.

This year will start being a good year for profits just as soon as each individual oil man, big and little, takes his eye off his neighbor's cut price signs and looks at the industry's lowered crude stocks, restricted crude production and refinery runs and lowered gasoline stocks.

Wage-Hour Law Talk on Program

MINNEAPOLIS, Jan. 16. — The wage and hour law as it affects oil jobbers, showmanship in selling and farm conditions, will be principal topics at the annual meetings next week of the North Dakota and Minnesota divisions of the Northwest Petroleum Assn. The North Dakota division holds its 15th meeting Jan. 23 and 24 at Fargo. The Minnesota division holds its 16th meeting Jan. 26 and 27 at St. Paul.

Programs for both divisions will be the same, both in subject and speakers. Names of the speakers have not yet been announced.

The wage and hour law discussion will be followed by a question and answer forum. Another speaker will discuss the keeping of records required by the law.

How to use salesmanship in oil marketing will be presented by a nationally known speaker. Another sales talk will be given by electrical transcription.

Farm and crop conditions in the territory the association serves will have an important part in the discussions, since jobbers attending these meetings derive a good part of their business from farmers.

Eastern Section

NEW YORK, Jan. 14.—Eastern section members of the Liquefied Petroleum Gas Ass'n. will meet at the Lincoln Hotel Jan. 25, to discuss plans for 1939, select new officers and hear reports from the chairman and other sectional officers, according to F. R. Fetherston, secretary of the association.

Dealer Has Day At Ill. Meeting

SPRINGFIELD, Ill., Jan. 16. —Future trends in petroleum marketing and the future of the dealer plan of marketing, are the featured subjects for the annual convention of the Illinois Petroleum Marketers Assn. to be held Feb. 8-10 at Hotel Pere Marquette, Peoria.

On Feb. 9, jobbers' day, among the subjects to be discussed will be the proposed state and national fair trade and price posting legislation and the tank car market structure as applied to jobber purchases.

Feb. 10 will be a dealers' session, to talk over dealer margins. H. K. Hiatt, president, and Carl Hodges, secretary, of the Illinois Assn. of Petroleum Retailers, will talk. Another speaker at this session will be William Girling, who, as president of the Gasoline Station Owners, Operators and Attendants Petroleum Assn. of Northern Illinois, will tell what his organization is doing.

Feb. 8 will be a closed meeting for members to bring up for discussion any subject they desire. A prominent speaker, himself an oil jobber, will speak at this meeting.

The annual banquet, together with floor show, and dance, will be held Feb. 9. Ladies are specially invited.

Construction Sought On Fair Trade Act

DETROIT, Jan. 16.—Petitions have been filed in the state circuit court here by The Texas Co. and Standard Oil Co. of Indiana, asking for declaratory judgments on cases brought by the Wayne county prosecutor's office under the Michigan fair trade low.

Criminal action was brought by the prosecutor's office in recorder's court several months ago against Texas, Standard, Gulf and several tire companies in separate suits charging violation of the state fair trade law in the sale of gasoline in tank cars to consumers. Action petitioning for a declaratory judgment it is reported, is to be taken also by Gulf.

The declaratory judgment petitions recite the facts in the case, and ask the circuit court for a construction of the fair trade act as to the rights of the companies to sell customers in tank cars at tank car prices where the customer is engaged in reselling a portion of the gasoline to consumers. The circuit's court judgment would apply only to the specific cases involved.

D. C. Dealers Organize

WASHINGTON, Jan. 4. — A mass meeting of retail gasoline dealers was held here to organize a dealers' association for the District of Columbia. About 300 dealers attended, and a committee of 24 was named to organize the group. Officers will be elected at the next meeting, sometime late this month.

Meeting Date Changed

WASHINGTON, Jan. 17. — The 36th semi-annual meeting of the National Petroleum Assn. will be held April 13 and 14 at Cleveland, rather than April 12 and 13, as previously announced, according to M. C. Mallon, of the association.

Roeser Hits "Gas" Buyers

(*Continued from page* 17)

vestigate the status of the code of fair competition in marketing practices submitted by the industry to the Federal Trade Commission early in 1935 after the NRA was invalidated. The code has lain dormant in the commission's files since that time.

The third task was to find out if it is lawful and feasible to require all integrated companies listed and reporting to the Securities and Exchange Commission to split up their annual statements to show separately producing, refining, marketing and transportation operations.

Similar to 1904

"Our casual investigation has revealed a condition in the marketing branch of the industry that is comparable with the conditions in 1934 when 'hot' oil was wrecking the industry," President Roeser said in commenting on the committee's work. "There is no 'hot' oil today but the pressure that has been put upon refiners has forced their quotations downward. Most refiners who have yielded to this pressure we believe, have done so reluctantly; nevertheless their prices to their marketing customers have gone down.

Own House In Order

Roeser went on to point out that crude stocks now are lower than in about 18 years and that gasoline stocks are lower than a year ago. Demand for all petroleum products in 1938, including exports, was greater than in 1937. He stated supply of petroleum is below demand, as is evidenced by the withdrawals of crude from storage. This has been due in great part, Roeser said, to the efforts of the producers to bring stability to the oil industry.

He said the producers believed that their present ills — what he termed a sub-normal price for crude and lack of market in many areas for the full amount of crude oil which conservation authorities fix as the proper amount to be produced — are traceable to bad practices in the marketing division of the oil industry.

"The result has been a succession of body blows to the producer and to the entire conservation policy so carefully built up and so spiritedly urged by public officials," Roeser stated. "The refiner, holding his gallonage position by reducing his wholesale price, invariably arrived at the place where he dropped the price of crude or turned from his customary fields of supply to those of lower cost production. 'Selective buying' is the term used to describe the latter. Its meaning is simply the skimming of the cream. The areas of small production per well, constituting the greater part of the nation's reserves, are the sufferers. Some such areas actually face abandonment today."

U.S. Break With Mexico Is Urged

By Teletype
N. P. N. News Bureau

WASHINGTON, Jan. 17.—Senator Robert R. Reynolds, North Carolina, has suggested that the U. S. break off diplomatic relations with Mexico as a result of the oil expropriations.

In a speech on the floor of the Senate Jan. 16, Reynolds discussed foreign trade and said the U. S. is in a "trade war" with Germany, Italy and other totalitarian powers and brought up the Mexican barter deal with the Reich.

"Right here at our back door are our neighbors, the Mexicans, from whom we buy silver and to whose country we send hundreds of thousands of tourists every year who spend money there; but the Mexicans deal with Germany because they get the best trade there," said Reynolds.

"A fact which really must of necessity command the attention of us all is that the very oil the Mexicans sell they took away from American investors. Talk about withdrawing diplomatic representation! If we are going to withdraw diplomatic representation from Germany, I say we had better withdraw diplomatic representation from Mexico. They have seized all our properties. They have seized all the farming land owned by American citizens and divided it up."

Referring to the competition of European nations for Mexico's trade, Reynolds said:

"You trade with a man not because you like him, but because you can get the best deal from him. We might just as well open our eyes and realize the condition which confronts us. Let us try to stay out of war and let us try to meet that competition. Let us try to meet that which has been flung out before us by Hitler and Mussolini and the rulers of other states that are now becoming associated with them."

Refinery Runs Normal Shifts Despite Strike

By Teletype
N. P. N. News Bureau

TULSA, Jan. 17.—The strike called by some members of the Oil Workers' Union against Mid-Continent Petroleum Corp. Dec. 22, now almost a month old, gives no indication of a settlement in the near future.

Late developments are that the whole matter has been dumped into the lap of the ponderously-moving National Labor Relations Board; that the union leaders declare they will "fight it out" for two years if necessary and that the corporation is operating its plant at its normal four shifts of six hours each.

The situation generally was quiet last week, after Oklahoma's new governor, Leon C. Phillips, had threatened martial law if more violence occurred. There have been a few fist fights, some "mystery" explosions and reports of attempted intimidation of families of loyal workers, but the strike front, on the whole, was quiet. So routine had the news become that the Tulsa papers are beginning to leave the daily story off the front page.

80 Return to Jobs

The corporation's officials said today that 80 of the employes who walked out when the strike was called have returned to their jobs. Dismissal notices have been sent to approximately 240 strikers for alleged violence and sabotage since the strike started. Of this number 140 were employed at the refinery.

Pickets continued to pace their beats before the Mid-Continent's service stations in Tulsa and a few other Oklahoma towns, but the boycott which was called by the CIO, corporation officials said, has not yet been reflected in loss of business. On the contrary many stations reported increased business.

That not all the Oil Workers' Union members joined the strike at its start was indicated by an incident which occurred in West Tulsa Jan. 16. Handbills were distributed by what union headquarters said were CIO members who had refused to join the strike. The handbills started in part:

"Even though a few men, from day to day, are telling you that the Mid-Continent can be broken by a boycott, they have not given this matter very close attention . . . .

"If the major oil companies co-operate with the Mid-Continent, it will take from now until the end of time to break the Mid-Continent."

The handbills also stated that Mid-Continent can operate with from 100 to 200 men less than before the strike, citing the six-hour day which provided work for a full crew in pre-strike days.

The refinery's workmen, after the strike was first called, were placed on eight-hour shifts but within a few days sufficient personnel had been obtained for the corporation to return to the normal six-hour shifts.

Gov. Phillips last week called Vice President J. C. Denton of the Mid-Continent company and Tulsa Police Commissioner Floyd Rheam into conference at Oklahoma City to discuss the general situation. There has been some speculation over the possibility of the new state board of arbitration, when appointed, investigating and possibly attempting to arbitrate the issues; but this is not generally believed likely, since the Mid-Continent has declared it legally must await action by the NLRB on complaint filed last November by the union.

* * *

Backs Postoffice In Refusing Soup

TULSA, Jan. 16.—Delivering "unusual" packages to workmen in a plant where a strike is in progress is not the duty of the post office, a federal court ruled here last week, when, it tossed out a plea for an injunction filed in an attempt to get a can of soup delivered to a workman at the Mid-Continent Petroleum Corp.'s refinery in West Tulsa.

A retired minister had attempted to mail the soup to a workman in the plant. The local postal authorities refused to make the delivery. Washington's officials upheld them. The suit resulted. Federal Judge Kennamer ruled the postmaster had a right to refuse to deliver any unusual package in a strike area.

The workman to whom the soup was consigned, did not have to go hungry, however, since no workmen have been molested in going into or coming from the plant since troops were stationed there soon after the strike was called.

The minister did succeed in getting a can of soup delivered by mail to a striker, but delivery was made to the man's home, which was considerable distance even from the military zone.

Schuh Defends his Position on Narrower Margin

'Cut Rates' Thrive and 'Weak Sisters' Can Keep Operating, He Tells Dealers

MILWAUKEE, Jan. 14.—Wilmer R. Schuh, president of the National Assn. of Petroleum Retailers, speaking Jan. 9 to Milwaukee dealers, not only defended his statement* of several months ago predicting narrower margins but went on to say that this was the "only fair way" of cutting down the excessive number of stations.

Taking the local retail situation as an example, in his speech to members of the Retail Gasoline Dealers Assn. of Milwaukee, Schuh said: "For the first 18 months after the Dealer Marketing Plan we were able to hold our own and make a little headway. A little over six months ago leaded gasoline became available to anyone who wanted it, and since then our troubles have increased.

"How long do you think you can hold your business with the cut-rates selling leaded 70 and 72 octane for 3 cents less than we are charging?" Schuh asked.

Schuh urged the Milwaukee dealers to check up on gallonages of branded and unbranded dealers for the past year as compared with the year previous.

"It's apt to make your hair stand on end," he said. "That we are in for a lot of trouble, no one can deny. Sixty-seven octane gasoline is not going to cure it."

Schuh said that, of course, he would like to make 5 cents a gallon at his own station which he has operated in Milwaukee since 1931, "but common sense tells me I cannot get it and stay in business," he said. "What's more the general public will not stand for too large a differential between our price and the cut-rate station price. They prove that by buying in increasing numbers from the cut-rates. And not only do we lose their gasoline business, but we lose all of our business.

"Under a competitive system of doing business," Schuh continued, "any price arrangement that keeps everybody in business is bound to fall by its own weight and the new stations that you see going up are helping it to fall. Some one might suggest that we have an ordinance passed to prohibit the building of any more stations. Aside from it being expensive and difficult to get an ordinance passed, once it is passed, it is too easy to have the ordinance amended.

"What every one of us must learn is that a margin that keeps a weak sister in business is going to invite a strong competitive factor into the market. Every man sitting here will agree with me that there are approximately 40 per cent too many stations. And the only fair way to eliminate any, is by each one of us coming to a sensible competitive level that will force the weak sisters to either improve their merchandising or fold up.

"All of you know of stations in your immediate neighborhood that have probably three or four owners during the course of the year, each of whom invests from $300 to $500 in the station and then goes broke because the station cannot be made to pay its own way. That's the type of outlet that ought to be closed. That's what I mean by a weak sister. Both the would-be owner and the rest of us would be much better off if the marketing set-up were such that he could tell without any doubt that he must do more than just peddle gasoline in order to make that station pay. That's what I mean by balanced selling.

"If this isn't the right method of solving the problem of the continuous building of service stations by every man who owns a piece of land located at the intersection of two streets, then how would you do it?

'Let's Open A Station'

"The man who owns this corner property says to himself, 'Let's see now, that gas station in the next block gets four or five cents for every gallon of gas he pumps and here I sit, doing nothing anyway, and that corner lot just stands there idle.' And he proceeds to do that very thing.

"If he is the type of man who is willing to put his shoulder to the wheel and be a real merchant, more power to him; but if he intends to merely scoop the gravy on gasoline, by taking it away from you and me or the fellow in the next block, whose lives have been spent in trying to build up a successful business, then I say, "Where do we go from here?

"And all of us will be a lot better off when one out of every three stations is either boarded up or torn down. If it takes a 6.5-cent over-all spread to keep all of us in business, how can you keep new stations from being built, or our customers from going to the cut-rates?

"If this isn't the right method of solving the problem of overexpansion and continuous building, then how would you do it? Would you rather see a referee appointed either by the industry or by the government and have him pick out stations at random and close them up?" Schuh asked.

Defending his Sheboygan speech, Schuh pointed out that he had said it was impossible for anyone to say what the margin should be in a particular locality, and that he had said, "I would like it clearly understood that we are not advocating a starvation margin."

"What we have urged the dealers in a given locality who are confronted with price-cutting, discounting and other forms of chiseling to do," Schuh reiterated, "is to move their price down to a point that will enable them to live, but at the same time hold their business and probably get back some of their lost business. At the same time the suppliers must be forced to make their dealers competitive."

On the same point, Schuh had said earlier in his talk, that "any supplier who lets you sit with a high tank wagon price is not only doing an injustice to you but is helping your cut-price competitor take away your business."

"And anybody who advocates a high margin in the face of stiff competition is either attempting to pull the wool over your eyes or is aiding you to commit suicide," said Schuh.

*See speech by Schuh, Oct. 12, 1938, before annual convention of Retail Gasoline Dealers Assn. of Wisconsin at Sheboygan, Wis., published in full text in National Petroleum News of Nov. 2, 1938. Pages 26-27.—Editor.

You Are Invited By The

Tennessee Oil Men's Association

(Recently Reorganized)

To Attend Its Convention, Peabody Hotel, Memphis, Tennessee, January 23, 1939

Representative from the Wage and Hour Division of the Department of Labor, Washington, will discuss the Wage-Hour law.

Of timely interest also to all oil men is the subject of octane ratings on gasoline, which will be discussed by J. Krawitz, president of the Phoenix Chemical Laboratory, Chicago.

No registration fee.

Morning and afternoon sessions.

This advertisement is carried by National Petroleum News with the best wishes for a successful convention—Editor

Refiners Find Demand Slow For New Third-Grade 'Gas'

N. P. N. News Bureau
By ALLEN S. JAMES

TULSA, Jan. 16. — The new leaded third-grade gasoline appears to be having difficulty in steaming up enough demand to create any sustained interest in the middle west, interviews with Mid-Continent refiners indicate.

Few refiners report a brisk demand for the new product. The majority refiners queried, including majors and independents, have declared almost as with one voice that "demand is not so hot."

Refiners in Kansas report their jobbers have indicated customers have been slow in swinging to the new product. One Kansas refiner said he had two jobbers handling the product in his home city and about 24 throughout the entire state. Another Kansas refiner said that while demand appeared to be picking up a little it still was far from the point where he could brag about his sales.

The Oklahoma refiners say the heaviest part of what demand they have is from metropolitan areas. "The trade generally is not going much further than inquiring if we will be able to supply the product if they should want it," one refiner stated.

Contract Basis

Refiners who do not have a large number of contracts but sell most of their output to jobbers on the open market report they are selling the new gasoline on the basis of the 67-69 octane number grade carried in trade publications. Some refiners' contracts with their jobbers call for payment for motor fuel on the basis of the price applying to the grade of gasoline shipped and those refiners accordingly are protected. Other refiners have a clause in their contracts protecting them in event of any change in quality of the products.

A few of the contracts protect the refiners by clauses which call for them to furnish their jobber with the same type of product their competitors have and for the price to be on the basis of the octane number furnished.

All of this apparently adds up to the fact that the Mid-Continent refiners are not going to sell, at least for the present, the new leaded, third-grade motor fuel at the price of the lowest octane bracket motor fuel as carried in price reporting mediums.

One company at least has indicated it is planning to offer the old type third-grade motor fuel at its own stations, and that its jobbers can continue to obtain that grade, either colored green or uncolored as they desire. Or the jobbers who desire to have the leaded 67 octane grade can obtain it but, since this is a new product, the old third-grade contract price will not apply, and a new price, based on the octane bracket in which the new product falls, will be applied.

Differential Fixed

In at least one other instance a Mid-Continent refiner has indicated that he will base his price on a differential of 0.375 cent under contract price for regular or house brand motor fuel.

The advent of the new third-grade, meanwhile, is reported to have caused a little concern to one or two refiners in East Texas. They have been selling a sizable amount of their gasoline, which is decidedly low octane third grade, to larger companies and they have not been equipped to lead their gasoline. One of them is reported to have been turned down on his application for a license, and he, accordingly, has been watching demand for the new product very closely in the past few weeks.

To add to his concern, it is reported that one large company in Texas is planning to give the new product a trial in one of the Texas cities. Should this company find from that test that there is a demand for the 67 octane third-grade motor fuel, it will be only a matter of a few weeks until it will be in general distribution in that state.

What the small refiners without a lead license will do down there then will become a pressing problem.

Talk Processing Tax On Imported Crude

N. P. N. News Bureau

TULSA, Jan. 16.—The processing of imported crude oil at Texas refineries and the exporting of its products is expected to be brought to the attention of the Texas legislature through the introduction of a bill to levy a processing tax, according to reports from Austin. Just who will sponsor the bill has not been announced.

It is known generally that the bringing in of foreign oil, particularly from Mexico, for processing at Gulf coast plants has been a matter of considerable concern to Texas Railroad Commissioner Ernest O. Thompson. Considerable testimony was obtained from the official of a company bringing in about 15,000 barrels of Mexican crude daily, when the commission held its history-making hearing at Austin last Dec. 12.

In some quarters it was indicated the attempt would be made to have the levy fixed at $1 per barrel.

Gulf Scouts Transferred

TULSA, Jan. 16.—John Bevel and Gilbert Fitzgerald, scouts for the Gulf Oil Corp. in Kansas, have been transferred to the company's division offices in Indianapolis. C. P. Fowler and Jack Sallee, of the Tulsa office, have been transferred to Kansas to succeed the two men transferred.

Feel Pressure Of Ill. Crude

By Teletype
N. P. N. News Bureau

TULSA, Jan. 17. —Mid-Continent producers once again are feeling the pressure of crude produced in the new Illinois fields.

With some of the Illinois crude said to be offered at 40 cents a barrel in the field, several observers have pointed out that price is close to the point where an Oklahoma refiner could buy that crude and deliver it to his plant for about what he is now paying for Mid-Continent crude, if not a little less.

Reports late last week indicated that an additional 3000 barrels of Oklahoma City crude would be looking for a buyer by Jan. 20, when the present purchaser lets his contract expire and replaces the oil with that from Illinois.

One of the larger operators who was given a severe body blow as far as its Mid-Continent operations are concerned when Illinois began to develop, and who now is quite active in that state, is reported seeking a buyer for a little "excess" Mid-Continent crude it expects to have during the year.

As far as the Mid-Continent itself is concerned, there apparently was little change in the general situation the past week, either with reference to existing pipeline proration, selective buying, "orphan" wells or wells shut in due to lack of market.

300,000,000 Bbls. Reserve In Illinois

N. P. N. News Bureau

TULSA, Jan. 16.—The active re-exploration of the Illinois Basin with tools new and improved since that area was first explored 25 years ago has added some 300,000,000 barrels of unexpected oil reserves, Robert J. Riggs told the Tulsa Geological Society at its meeting Jan. 10.

Riggs, is chief research geologist of Stanolind Oil & Gas Co., and retiring president of the society.

The Illinois Basin, which is a part of a much larger basin including parts of Indiana and Kentucky, Riggs said, has an area of roughly 150 miles square which gives promise of producing oil in varying degrees. This area is equal to approximately one third of the state of Oklahoma, he added, and it stands to reason that many more pools and horizons of unexpected production will be found, greatly increasing the present indicated reserves.

Riggs said the outstanding features of the recent Illinois Basin play were as follows:

Principal Features

"First, the recognition of the presence in Illinois of a sedimentary and structural basin exhibiting a geologic history which experience has taught us should be favorable to the generation, accumulation, and preservation of oil in commercial amounts which, together with the presence of old production at shallow depths on the margins of the basin, led to an active re-exploration with tools new and improved since this area had been actively explored 25 years ago.

"Second, as a direct result of this re-exploration, the discovery almost simultaneously of a new type of field in the Mississippi lime on the east side and a Chester sand pool of the old Sandoval type on the west side and, a third important event, the discovery in 1938 of a slightly deeper more prolific and larger type of pool such as Salem on the west side."

Safety Training Course

DALLAS, Jan. 16. — A safety training course for petroleum engineers was opened here Jan. 16 by the U. S. Bureau of Mines. Engineers from oil companies in six producing states in the southwest attended. The course is said to be the first of its kind offered the industry. Engineers who attend in turn will conduct regional schools.

20 New Tests Start In Ill. 7 In Kentucky

CHICAGO, Jan. 16.—Activities in the southern Illinois oil fields continued to rise last week, with 20 new wells started.

Completions last week were 64 wells, 57 producing, six dry holes, one test was abandoned, and 154 wells were drilling. The week previous 13 new wells were started, 150 were drilling, and there were 77 completions, 59 producing and 18 dry hole wells.

Kentucky last week had 13 completions, six of these producing wells, seven wells were started and 64 were drilling. The week previous there were eight completions, four of these producing wells, 12 wells started and 61 wells drilling.

Indiana last week had six wells started, 36 wells drilling, and completions were one producing well and two dry holes. Statistics for the previous week were seven wells started, 33 drilling, and of the three completions two were producing wells.

Large Completions

Pure Oil Co. has four Illinois completions last week. In Clay county, the Arthur Routt "A" No. 1 flowed 570 barrels in 24 hours, the Routt Consolidated No. 2 flowed 404 barrels in 24 hours, and the Daisy Bunn No. 4 flowed 262 barrels in 24 hours. In the Cisne pool in Wayne county the Brown Consolidated No. 1 well flowed 894 barrels in 24 hours.

Several large wells were completed in Marion county, Illinois. The Kingwood-Bell J. O. Shanafelt "C" No. 1 flowed 891 barrels in 24 hours and the No. 9 well flowed 1369 barrels in 10 hours. Shell's Young Heirs No. 4, after shooting, flowed 978 barrels in 24 hours. The Hollingsworth's Kalkbrenner No. 4 flowed 1650 barrels in 24 hours from the McCloskey.

In Fayette county, Illinois, Carter's Mary Smith No. 1 flowed 465 barrels in 24 hours, after shooting, through two-inch tubing. Stewart's Griffith No. 2, after shooting, pumped 175 barrels in 24 hours. Magnolia's T. C. Clow No. 17 flowed 343 barrels in seven hours after shooting.

In Indiana the Sun Oil Co. completed its first well on the E. J. Schroeder farm, pumping 151 barrels in 24 hours.

In Daviess county, Kentucky, Major Oil Co. completed its Prudential Life No. 3, pumping 125 barrels in 24 hours after acid treatment, and No. 4 pumping 25 barrels in 24 hours after acid. Ohio Oil's Oscar Lively No. 2 pumped 250 barrels in 24 hours after acid. Aetna Oil Service's Henry Miller No. 2 pumped 100 barrels in 24 hours after acid.

Reports have it that the White House has an indirect interest in the Illinois oil fields through drilling on the farm of Mrs. J. M. Helm, social secretary to Mrs. Eleanor Roosevelt, near Grayville, in Wabash county. A test is being drilled on the Helm farm and last week was down 950 feet.

1-Day Closing Of Large Wells In Long Beach

Telegraph Bulletin

LOS ANGELES, Jan. 17. — California daily crude production Jan. 13 was 629,556 barrels for all fields. This was despite reopening of the San Joaquin Valley Lakeview field on the 11th, after a 10-day shutdown. The state's total output Jan. 6 was 635,748 barrels.

The "Valley" and "Coastal" fields underproduced their proration allotments 10,578 and 4876 barrels respectively, with the Los Angeles Basin 39,895 barrels "over." However, this latter area was about 10,000 barrels under its actual output of a week ago.

The entire Long Beach area west of Atlantic Avenue is now to be included in the one-day shutdown each week. It will be District 6.

* * *

N. P. N. News Bureau

LOS ANGELES, Jan. 14.—Operators in the Long Beach field added their bit to the drive for a California proration goal of 600,000 barrels daily, by curtailing nearly 27,000 barrels of crude production during four days of the past week. This was accomplished under a plan proposed by the producers' executive committee, whereby all large wells in each of six surface areas of the field will be shut down one day a week.

Although achievement in the initial test fell short of the objective, industry leaders believed it too early to predict final results, but stated the results obtained during the coming week would tell the story.

Under the shut-down plan, formally approved by operators in a meeting at Long Beach, Jan. 12, the Long Beach productive surface area lying between its eastern limits and Atlantic Avenue on the west, was delimited into five areas of approximately the same size.

Shutting down wells Jan. 9 in district No. 1, which included 240 producing wells, resulted in a curtailment of 5200 barrels that would normally have been produced by 175 wells. The remaining 65 wells, representing 1400 barrels daily, remained open because of possible damage or loss in any attempt to curtail their output.

Curtailment By Districts

On Jan. 10, District No. 2 curtailed 5000 barrels from 110 wells, with 57 wells and their production of 1650 barrels continued on production. District 3 was shut down on the 11th, with 65 wells curtailed 3000 barrels and 67 small wells, with 1000 barrels of production, remaining open. Curtailment of 8400 barrels was obtained from 202 wells in District No. 4 on Jan. 12, whereas 138 open wells produced 2600 barrels. In District 5, 279 wells shut in 5150 barrels.

It was indicated at the close of the week that the area lying west of Atlantic Avenue would be designated as District 6 and would take its place in the daily shut down program.

As their contribution to the curtailment drive, operators in the Wilmington field have unanimously agreed that production from the prolific Ford zone shall remain undeveloped for at least a year and that daily maximum output for all wells in the field shall be 300 barrels for each well. The Ford zone, which underlies the Terminal sand, is productive in some sections of the Wilmington field, but has not been extensively developed in the Long Beach section.

Conditional Shut-In

Complete shutting in of the Ford zone is expected to be conditional on similar curtailment policies by operators in other flush areas of the state.

The Petroleum Fact Finding committee of California operators and private citizens, appointed Dec. 20 to look into ways and means for improving the voluntary curtailment setup, has gathered considerable data pertaining to present methods of allocating production among wells and fields in the state and is now going into conference with operators in the Los Angeles Basin, San Joaquin Valley and Coastal fields.

The first of these meetings will be held in Los Angeles, January 16th, where operators have been invited to bring any constructive criticism or suggestions to help the committee in its consideration of the problems.

Tightening Proration Laws Urged in Oklahoma, Kansas

N. P. N. News Bureau

TULSA, Jan. 16. — Specific recommendations pertaining to oil proration and the gasoline tax were made by the recently-inaugurated governors of Oklahoma and Kansas when they appeared before their respective Legislatures last week.

Oklahoma's Gov. Leon C. Phillips and Kansas' Gov. Payne Ratner saw eye-to-eye on those particular points. Each recommended exemptions from the tax of all motor fuel not used on the highways but tighter laws to check tax evasion. Each also urged certain changes in the proration laws.

Gov. Phillips also touched on the matter of taxes, and in view of the fact that the oil industry pays such a large portion of the state's taxes, his remarks were of particular interest to oil men.

"I am firmly convinced that we should not attempt to discover any new source of revenue, nor should we further burden the tax payers of Oklahoma by increasing present taxes," Phillips said. "There is no doubt but that our present high rate of income tax is driving opportunity for expansion of industry from the state of Oklahoma."

Phillips recommended the repeal of the mileage tax now assessed against trucks, the relevying of an automobile license which would reduce the fee on passenger and pleasure cars and increase that on trucks.

Abolish Gasoline Inspectors!

In connection with his economy program Phillips recommended the abolishment of the positions of gasoline inspectors, political plums for the Oklahoma Corporation Commission.

"Our citizens generally know," Phillips said, "that no worthwhile service is performed by this staff."

Elimination of ports of entry also was recommended by the new governor.

"I recommend that you refuse to appropriate for the Petroleum Experiment station at Bartlesville (U. S. Bureau of Mines) as that institution is one which should properly be supported by the federal government," Phillips said.

"I recommend the enactment

of a gasoline tax law which will exempt gasoline, naphtha and benzine used in cleaning establishments, and gasoline used in farm tractors, airplanes, or other stationary engines or machinery not actually propelled upon the highway of the state; but recommend the adoption of any legislation which will strengthen the collection of taxes on gasoline actually used in motor transportation upon the highways. . . .

"I recommend the re-enactment or renewal of the interstate oil compact authority, to the same extent as heretofore provided by the act of the fifteenth legislature.

Equitable Proration Urged

"I recommend such amendment and revision of our oil proration laws as will guarantee equitable proration, ratable and equitable taking from all pools, and prevent waste and selective buying by any purchaser."

Gov. Ratner treated oil under a more general heading of natural resources. "Among the problems of more recent origin," he said, "are maladjustment in the development of our oil resources. . .

"Our second greatest industry today is the production of crude oil . . . Our laws regulating proration need clarification and strengthening . . . . Refining of petroleum products is of particular significance since Kansas crude potentials have grown tremendously in recent years. Particular effort should be devoted to the expansion of the refining industry and to promote the use of products refined from Kansas crude . . . . .

Check Tax Evasion

"The exemption of gasoline used for non-highway purposes from the motor fuel tax is of far-reaching importance in Kansas. It is important that this exemption provision be retained . . . . . however, the motor fuel tax law should be strengthened to do away with evasions of the tax, without harassing the honest gasoline dealer and consumer of exempt gasoline with unfair and unreasonable regulations. I hope this session will work toward that end.

Ratner's recommendation with reference to labor included the following:

"I recommend the adoption of measures preventing abuses in granting of injunctions in labor disputes . . . . All labor legislation, of course, should be fair to the three parties in interest—the public, the employe and the employer . . . . ."

"I recommend that this legislature enact laws recognizing the principle of collective bargaining, permitting employes to choose their own representatives without interference."

Unit Drilling, Proration Provided In New Michigan Conservation Bill

MT. PLEASANT, Mich., Jan. 16.—A proposed conservation bill for Michigan oil fields is being whipped into final shape this week and probably will be introduced in the legislature in about a week.

Preparation of the bill has been going on for about three months, and the final draft will be studied by directors of the Oil & Gas Assn. of Michigan at a meeting Jan. 17, A. J. Weideman, executive secretary, has announced.

The proposed bill has been developed jointly by the state authorities and representatives of the petroleum industry. Dr. R. A. Smith, state geologist, said the bill has been patterned after conservation laws in southwestern oil states. The state's direct interest in conservation is through ownership of much land in northern Michigan, some of this in the oil regions. The administration is reported to favor conservation legislation.

Wildcatting would not be hampered by the proposed conservation bill, Weideman pointed out.

Proration Machinery

Proration is provided for in case crude oil floods the market. Then the commission director would call the advisory board, the board would study production of old and new fields, the market, and set up new pool allowables.

Weideman pointed out that it never would be economically sound to attempt to set arbitrary crude prices, as there is too much Illinois and southwestern crude competing with Michigan's output and "we have to be competitive." The only consideration in price, he continued, would be to have parity with other crudes.

Under the provisions of the bill the Director of the Michigan Conservation Commission would act as the "supervisor of wells" and be empowered to appoint an advisory board of six persons, three of whom would be chosen from oil and gas producers, or operators, or their representatives, whose ownership, production, or operations are chiefly within the state of Michigan. They must be residents of the state.

The state conservation commission would then serve as an appeal board, whenever the advisory body considered any action, or inaction on the part of the supervisor as unduly burdensome, inequitable or unreasonable.

In prevention of waste, the supervisor is given authority in the bill to limit the total oil production in the state, after consulting the advisory board, distributing the allowable production among fields and pools "on a reasonable basis, giving, if reasonable, under all circumstances, to each pool with small wells of settled production, an allotment which will prevent a general or premature abandonment of the wells in the pool."

Where the total allowable production for any field or pool is less than its unrestricted potential, the bill empowers the supervisor to prorate the allowable among producers in a manner to prevent or minimize avoidable drainage from each developed area which is not equalized by counter drainage.

Restricts Drilling

To prevent unnecessary drilling, the supervisor, after conference with the advisory board, may establish a proration unit for each pool. This unit is defined as the maximum area which may be efficiently and economically drained and developed by one well, except in those pools, which, prior to the effective date of this act, have reached a stage in development where such a drilling unit would be impracticable or unreasonable.

Pooling of properties, or of part properties is permitted, and, if not agreed upon, may be required in cases where the size or shape of separately owned tracts would, under enforcement of a uniform spacing plan, proration, or drilling unit, otherwise deprive the owner of such tract of the opportunity to recover his share of oil and gas in the pool.

Provision is also made that the owner of any tract smaller than the drilling unit established for the field shall not be deprived of the right to develop such tract as long as it is done without waste. Production from a less-than-unit piece of land would be allocated in the ratio of its area to the area of a full unit in the field, except as a smaller ratio is required to maintain bottom hole pressures to reduce production of salt water, or to reduce an excessive gas-oil ratio.

Well Locations

Each well permitted to be drilled on any drilling unit or tract, according to this act must be located approximately in the center thereof, unless individual conditions warrant exceptions.

Minimum allowables, especially with respect to areas already drilled when the act takes effect, would be set so that production would repay reasonable lifting costs and prevent premature abandonment of wells and resulting wastes.

The bill makes it unlawful for any person to sell, purchase, acquire, transport, refine, process or otherwise handle or dispose of any "illegal" oil—oil produced in excess of prescribed allowables—in whole or in part or any "illegal" product of oil. An "illegal" oil and products, and conveyances used in transporting or containers used in storage of such oil or products would be subject to confiscation under terms of this act.

A basis of crude production allowables is not set forth in the measure, but provision is made for consideration of reports, estimates, findings of fact or similar documents of the U. S. Bureau of Mines or other agencies of the goverment authorized to act with respect to the reasonable market demand for oil.

A fee of $25 is prescribed for each drilling permit and a fee of $1 for a permit to drill a well for geological information or to drill a key well or disposal well.

February Demand Hearings Are Set

TULSA, Jan. 16.—Hearing on market demand in February for Kansas crude, to determine allowable production for the month, has been set by the Kansas Corporation Commission for Jan. 25.

The Oklahoma Corporation Commission has set Jan. 27 as the date for its February demand hearing. Operators were scheduled to meet with Conservation Officer W. J. Armstrong the afternoon of Jan. 26 to tabulate nominations.

The Texas Railroad Commission already has announced its next hearing will be March 15.

Court Holds Station Tanks And Lubsters are 'Movable'

N. P. N. News Bureau

CLEVELAND, Jan. 16. — Equipment such as lubsters, gasoline pumps, air compressors and underground storage tanks, installed by the supplying company, are "trade fixtures" and may be removed, according to Judge Charles R. Sargent of Ashtabula County (Ohio) common pleas court, in a decision against claims to the equipment asserted by Home Owners Loan Corp.

The HOLC had contended that this equipment was subject to a mortgage which the government-lending agency had made on the property, insisting that under the doctrine of "common-law fixtures", the equipment had become part of the realty. Prior to giving the mortgage, the home-owner had leased a portion of the premises for erection and operation of a filling station.

The court pointed out that, while the equipment was a necessary adjunct of a filling station, it was not necessary to a home, adding that the HOLC had apparently not taken the station equipment into consideration when it made the loan on the house. It is also common knowledge, the court added, that the HOLC makes loans on residential properties, not business property.

Several lessees in succession had operated the station. Each time that a new supplier came in and bought the equipment from the outgoing supplier, L. L. Norris, the home-owner, had given an "owner's assent" to the agreement by the supplier leasing the equipment to the new operator (such agreements carried provisions for removal by the supplier of the equipment at end of the term).

After several operators had tried their hand at making a go of the station, Norris decided that he would operate it himself.

Momentary Title No Bar

Even the fact that Norris, the homeowner, had had momentary title to the equipment (buying it from one supplier and selling it almost immediately to the next supplier) did not alter the situation, the court said. Counsel for the HOLC had contended that, even though the items of equipment were "trade fixtures", the momentary title vesting in Norris made them "common law fixtures" and had extinguished the right to remove them.

The four gasoline pumps were bolted to concrete islands, the air compressor sat on the floor of the office and was not attached to the floor, the lubsters also were unattached, resting on their own weight, and the underground tanks were about one foot below surface of the crushed stone driveway, according to the court's opinion.

Hubert Fuller, of Cull, Fuller & Laughlin, Cleveland law firm, represented the oil company which had filed a cross-petition for recovery of the equipment after being joined as a defendant in the foreclosure suit brought by the HOLC.

Fuller, in support of his contention that underground tanks were "trade fixtures", pointed out that the trade custom in the oil industry is to regard them as movable and offered evidence of how easy it was to remove tanks, such as by flooding and floating them out.

Title of the case was *Home Owners' Loan Corp. vs. L. L. Norris et al.*

Trucker 'Route' Must Specify Highways, Held

N. P. N. News Bureau

WASHINGTON, Jan. 16. — Defining for the first time the term "route" as used in the Motor Carrier Act, the Interstate Commerce Commission has ruled it means the specific highways to be traveled by motor carriers between given points.

Consolidated Freight Lines, operating the Pacific Coast and northwestern states, sought operating permits between various points, and in its application to the ICC contended that "in order to preserve the inherent flexibility of motor transportation, motor carriers should be permitted to use any and all available highways to serve the shipping points covered by state and interstate authorizations."

Protestants against Consolidated's application said such an interpretation of the word would permit the applicant company to "run wild over seven states," and prevent federal co-operation with state officials in efforts to avoid congestion on particular highways.

Under the Motor Carrier Act the Interstate Commerce Commission is charged with the duty of establishing "reasonable through routes." So, ruling on the contention of the Consolidated Lines, it asserted:

"Clearly it is contemplated that where specified points are to be served, the 'routes over which' the service is to be rendered shall also be named, and we know of no way of describing routes for motor carriers except in terms of highways."

Cannot Transport Oil

Among commodities which Consolidated sought permission to transport were petroleum products, but this was denied by the commission, which held:

"Although the applicant owns and operates tank trucks, no proof was submitted that . . . . liquid petroleum products have been transported in interstate or foreign commerce. The authority sought in this respect is therefore denied."

In most respects, however, the application was granted, but the specific "routes" were outlined.

Pipeline Movement Drops 16 Per Cent

N. P. N. News Bureau

WASHINGTON, Jan. 16.—Oil and gasoline moved by pipeline during the July-September quarter of 1938 totaled 280,461,292 barrels, compared with 334,618,312 barrels in the same period of 1937, according to data compiled by the Interstate Commerce Commission from the quarterly reports of 40 pipeline companies, a decrease of 16%.

This compilation was from the first quarterly reports submitted by the companies under the ICC's recent order requiring such reports.

The figures are broken down by companies. They show that total transportation revenue during the third quarter of 1938 amounted to $56,188,421, compared with $64,698,249 during the same period a year before, a decrease in revenue of 13.15 per cent.

"Road Octane Numbers" Confusing In Testing Performance, SAE Told

DETROIT, Jan. 14.—Use of "road octane numbers," as found by surveys of road performance tests, is now felt to be undesirable, because of their variability and the confusion of the detonation problem which they produce, it was brought out during the annual meeting here of the Society of Automotive Engineers, in a paper by L. E. Hebl and T. B. Rendel of St. Louis, Shell Petroleum Corp.

Their paper was titled; "Spark Timing and Its Relation to Road Octane Numbers and Engine Performance." Its purpose was to show the effect of adjustments which have been made to bring about such a wide distribution of octane requirements among cars.

They concluded that it seems possible that an engine could be designed whose spark advance required for maximum power would fall below the borderline knock curve on a commercial grade fuel at all speeds. Some of their data showed that the advantage now enjoyed by cracked fuels over straight-run fuels may diminish rapidly if compression ratios of engines are increased materially.

"Varnish" Discussed

No conclusions were agreed upon as to the cure for "varnish" difficulties in modern automotive engines, brought on possibly by closer clearances and higher speeds. What fuels, lubricating oil, or their combination contribute to the problem was not proved by the experience data presented.

The possibility of reducing the average octane-number requirement of cars by reducing the permissible maximum tolerance on distributor-cam firing angle was restated by A. J. Blackwood, C. B. Kass, and O. G. Lewis, of Standard Oil Development Co., in a paper substantially like that presented at the American Petroleum Institute meeting in November. Their studies involved differences in octane-number requirement of different cylinders of the same engine.

Neil MacCoull, The Texas Co., questioned the necessity for a car being completely free from knock at all times. Use of a spark retarded slightly from that required for optimum power, he found, resulted in trivial loss of power but appreciably lowered the octane requirement of the fuel.

Diesel Problems

Diesel ignition and fuel problems were discussed in two sessions the last day of the meeting. J. G. Williams, of Superior Engine Division, National Supply Co. described work with a cathode-ray oscillograph, from which he concluded that the rate-of-pressure rise card is not very suitable for studying combustion phenomena, even though excessively high rates of pressure rise are responsible for knock.

Strong November 'Gas' Demand Puts 11 Months Ahead of 1937

N. P. N. News Bureau

WASHINGTON, Jan. 16. — Domestic motor fuel demand in November was 44,991,000 barrels, or 5 per cent higher than November 1937 demand, the U. S. Bureau of Mines reports.

The November increase puts 1938 demand once more ahead of 1937, despite the summer slump. Through June 1938, demand ran ahead of 1937, but in July it dropped off and continued to run slightly below the previous year's figures. Indications now are that another increase will be shown in December demand figures so that, for the entire year 1938, domestic demand will run more than 1,000,000 barrels ahead of 1937.

For the 11-months ended with November, domestic demand was 480,008,000 barrels, compared with 479,887,000 barrels in the same period a year previous, a gain of 121,000 barrels.

From the standpoint of motor fuel stocks, the November record was described by the Bureau as "outstanding." Finished gasoline stocks increased about 500,000 barrels during the month to a total of 64,083,000 barrels; but unfinished stocks were reduced about 250,000 barrels to 5,452,000 barrels total, and natural gasoline stocks were reduced about 1,000,000 barrels to 5,742,000 barrels total, so that the total of all declined for the first November since 1934.

Less Heating Oils Used

But the fine weather which contributed to the 5 per cent increase in gasoline demand in November had an adverse effect on domestic fuel consumption, with the result that less kerosine and distillates were used than the year before.

However, the industrial pickup caused a continuance of the rally in demand for residual fuels, which amounted to 27,621,000 barrels the past November, compared with 26,180,000 barrels the same month a year before. Kerosine demand in November was 5,368,000 barrels, compared with 5,705,000 barrels in November of 1937. Distillate fuel demand was 11,472,000 and 11,639,000 barrels respectively for the two months.

Daily average output of crude in November was 3,280,000 barrels, compared with 3,447,000 barrels in November, 1937. "Actually the producing rate would have increased more than indicated if Texas had not had Saturday and Sunday shutdowns for all of November," the bureau stated.

Illinois Passed 100,000 bbls.

One feature of November production was the passing of the 100,000 barrels-per-day mark by Illinois for the first time since the boom of 30 years ago. Illinois' daily average production was 102,000,200 barrels, and there were 319 wells completed in the state during the month. Daily average production in all major divisions of Texas, except East Texas increased during the month and California production again turned upward, but Oklahoma's output continued to decline—to 441,000 barrels.

Crude runs to stills decreased during the month, the daily average of 3,244,000 barrels being 7000 barrels less than October and 77,000 barrels less than November 1937. Imports of foreign crudes also decreased to a daily average of 79,000 barrels.

Daily average production of natural gasoline was 4,244,000 barrels in November, compared with 4,269,000 barrels in November, 1937.

Crude Stocks Drop

N. P. N. News Bureau

WASHINGTON, Jan. 16. — Bureau of Mines today reported a drop of 699,000 barrels in refinable crude stocks during the week ended Jan. 7, bringing total stocks on that date to 272,325,000 barrels.

Stocks on January 8, nearest comparable date in 1938, were 303,078,000 barrels.

A tabular presentation of stocks by grade or origin will be found on opposite page.

New Processes Will Provide Better Balanced Plant Yields

NEW YORK, Jan. 16.—Increasing availability of newly-developed refining processes providing greater flexibility of yields, promises ultimately to correct the past lack of relationship between current demand for light fuel oils and gasoline and the normal yields of each from a barrel of crude oil. This observation was made by Fred Van Covern, director of the division of statistics of the American Petroleum Institute, in his recent Analysis of Petroleum Situation.

The petroleum industry entered 1939 not far from a basically sound condition, the analysis points out. Achievement of a measure of stability during the coming year is possible if the industry uses its new tools to keep its operations in line with economic requirements.

Whether the present weak economic situation continues depends "upon whether or not the industry consolidates the gains that could ensue from its present fairly well liquidated position and to what extent gasoline inventories are built up during the present winter season," Van Covern stated.

Concurs In Outlook

In most respects, the analysis is in general agreement with the outlook for 1939 as presented in NATIONAL PETROLEUM NEWS issue of Jan. 11. The suggestion is made that refiners would find it "good operating practice" to build up stocks of light fuel oils in the summer, when meeting the peak demand for motor fuel "thereby making it unnecessary to produce them as currently required, with the resultant uneconomically large production of gasoline" during the winter the result of which was shown graphically a week ago in NPN.

An additional move toward increased economic stability of the oil industry Van Covern states, would be the establishment of crude oil production allowables for longer periods in order to eliminate some of the difficulties and many of the uncertainties resulting from monthly changes in rates of production. Crude stocks are still above minimum economic requirements and indications are that they will go no lower, it is pointed out.

Full Takings Of Pa. Crude By South Penn

PITTSBURGH, Jan. 16. — South Penn Oil Co. today announced its lifting of curtailment of crude oil purchases on the lines of the Bradford Transit Co. in western Pennsylvania and the Eureka Pipe Line Co. in West Virginia. Both are subsidiaries of South Penn.

Bradford Oil Refining Co. and other independent purchasers in the Bradford district announced last week they would return to acceptance of all crude oil runs of local producers on their lines.

"We find that the current demand for Eureka grade oil is sufficient to permit us to purchase a larger amount," South Penn said. "Consequently, on this date (Jan. 16), and until further notice we will accept any amount equal to 100 per cent of all purchases during September, 1938, instead of 75 per cent as outlined in our letter of curtailment dated Oct. 31, 1938".

Curtailed purchases had been made by South Penn and others in the Bradford district for some time prior to the curtailment of purchases in West Virginia. Revival of the demand for bright stock and resultant increased demand for crude was said by some observers to have prompted the lifting of "pipeline proration" in the Bradford district.

Missouri Tax Receipts Up

JEFFERSON CITY, Mo. — Missouri's gasoline tax collections in November were $1,018,561 as compared with $1,004,683 in the same month of 1938.

Concurs With NPN's Estimates In Oil Man's Planning Issue

In general the estimates and conclusions arrived at by Fred Van Covern, director of the statistical division of the American Petroleum Institute, as presented in his Mid-Year Analysis of the Petroleum Industry, agree with those presented by NATIONAL PETROLEUM NEWS in its Jan. 11th Oil Man's Planning Number.

Van Covern estimates the demand for heating oils for home heating this winter season will be 10 to 15 per cent above the 63,000,000 barrels consumed last year in the winter season. This figure does not include the heavier grades used in heating large buildings.

NPN estimated 140,000,000 barrels of oil would be used for heating purposes throughout all of 1939, including the heavier grades used in heating large buildings. This is an estimated increase of 20 per cent above 1937, the latest official figures available.

Van Covern estimated that 19,360 oil wells were completed in the U. S. in 1938, about 18 per cent less than the 23,839 wells completed in 1937.

Latest Oil Industry Statistics

Trends of Basic Figures

	Jan. 14	Jan. 7	Jan. 14, '38
Crude Production (Bbls. daily)	3,243,600	3,214,900	3,476,900
Crude Imports (Bbls. daily)	65,420	61,430	81,290
Crude Runs to Stills (Bbls. daily)	3,260,000	3,170,000	3,158,000
Gasoline Stocks (Bbls. total)	73,752,000	72,818,000	81,002,000
Gas & Fuel Oil Stocks (Bbls. total)	142,460,000	143,333,000	119,433,000

Cumulative daily average crude runs to stills Oct. 1 to Jan. 14 indicate 91,050,000 barrels of gasoline stocks April 1, as against 82,000,000 barrels estimated maximum economic requirements.

Total gas and fuel oil stocks were reduced 2,363,000 barrels the first two weeks in January; increased 6,000,000 barrels the first two weeks of January, 1938.

Crude Oil Production for the U. S.

(American Petroleum Institute figures)

	Week Ended Jan. 14 Barrels	Jan. 7 Barrels	Dec. 31 Barrels
Oklahoma City	95,600	74,300	97,400
Total Oklahoma	420,950	402,700	421,900
Kansas	152,300	137,150	149,100
East Texas	372,000	371,950	371,850
Total Texas	1,275,300	1,292,900	1,280,300
Total Louisiana	266,450	261,950	254,250
Illinois (new pools)	123,000	121,350	125,800
California	629,600	624,700	614,900
East of Rockies	2,614,000	2,590,200	2,586,550
Total U. S.	3,243,600	3,214,900	3,201,450
Crude Imports	65,420	61,430	107,280
Total New Supply	3,309,020	3,276,330	3,308,730

Stocks of Gas Oil and Fuel Oil Drop Faster

N. P. N. News Bureau

NEW YORK, Jan. 17. — Continuation of the recent decline in stocks of gas and fuel oils and increase in gasoline stocks during the week ended Jan. 14 was reported by the American Petroleum Institute today.

Gas and fuel oil stocks dropped 873,000 barrels, while gasoline stocks rose 934,000 barrels. Increased gasoline production accounted for approximately 25 per cent of the increase in stocks. Crude runs to stills jumped 90,000 barrels to a daily average of 3,260,000 barrels.

Compared with the trend at this time in 1938 the trend of inventories of both gas and fuel oils and gasoline last week was toward more favorable economic levels.

Inventories of gas oils and distillates last week declined 501,000 barrels; in the comparable seven-day period of 1938, stocks of these oils declined only 231,000 barrels.

Stocks of residual fuels declined 372,000 barrels last week while in the comparable 1938 period stocks of these oils increased 659,000 barrels.

While stocks of all gas and fuel oils have declined more than 12,000,000 barrels from the 1938 peak, however, on Jan. 14 they were still 23,000,000 barrels above stocks on the same 1938 date.

The trend of gasoline inventories was even more favorable than the trend in the heavier oils. As compared with the 934,000 barrels added to storage last week, 2,006,000 barrels were added to storage in the Jan. 7-14, 1938, period. Stocks Jan. 14 were 7,250,000 barrels below stocks last year.

Crude runs, however, last week were 102,000 barrels higher than the 3,158,000 barrels daily average in the comparable period last year.

A. P. I. Weekly Refinery Report

(Figures in Thousands of Barrels of 43 Gallons Each)

Districts	Per Cent Capacity	Daily Average Crude to Stills Week Ended Jan. 14	Jan. 7	Per Cent of Reporting Capacity Operated Week Ended Jan. 14	Jan. 7	(a) Gasoline Production Week Ended Jan. 14	Jan. 7	Stocks Total Finished and Unfinished Motor Fuel(b) Week Ended Jan. 14	Jan. 7	Stocks of Gas and Fuel Oil — Gas Oil and Distillates Week Ended Jan. 14	Jan. 7	Residual Fuel Oil Week Ended Jan. 14	Jan. 7	Total Week Ended Jan. 14	Jan. 7
East Coast	100.0	462	494	75.1	80.3	1,346	1,265	17,789	17,715	5,364	5,521	6,861	7,011	12,225	12,532
Appalachian	85.9	99	94	77.3	73.4	363	337	3,116	3,086	260	259	527	523	787	782
Ind., Ill., Ky.	89.5	423	442	82.3	86.0	1,745	1,809	11,783	11,621	3,326	3,375	3,781	3,868	7,107	7,243
Okla., Kans., Mo.	81.6	245	225	71.6	65.8	(c)857	(c)851	6,560	6,481	1,319	1,292	3,040	3,097	4,359	4,389
Inland Texas	50.3	117	87	73.6	54.7	517	396	1,644	1,725	361	372	1,614	1,580	1,975	1,952
Texas Gulf	89.5	846	777	94.5	92.7	2,580	2,535	9,964	9,662	4,054	4,301	6,550	6,582	10,604	10,883
La. Gulf	97.3	123	120	84.8	82.8	261	308	2,233	2,331	1,048	1,092	992	1,171	2,040	2,263
No. La., Ark.	55.0	41	42	74.5	76.4	127	116	468	486	308	298	568	563	876	861
Rocky Mt.	54.2	40	38	62.5	59.4	231	218	1,387	1,320	141	140	553	543	694	683
California	90.0	509	500	68.3	67.1	1,549	1,514	14,188	13,921	10,660	10,682	87,803	87,713	98,463	98,395
Total Reporting	85.8	2,905	2,819	79.3	78.2	9,576	9,349	69,132	68,348	26,841	27,332	112,289	112,651	139,130	139,983
U. S. Total (d)		3,260	3,170					73,752	72,818	27,621	28,122	114,839	115,211	142,460	143,333
U. S. Total, 1-14-38 (d)		3,158						81,002		22,104		97,329		119,433	

(a) Includes straight-run, cracked, and natural blended.
(b) Includes stocks at refineries, in bulk terminals, pipe lines and in transit.
(c) 12% of reporting capacity in this district did not report gasoline production.
(d) Estimated, U. S. Bureau of Mines basis

N.P.A. Drops Weekly Penn Lube Reports; Now To Be Released Monthly

WASHINGTON, Jan. 14.—Weekly reports on inventories of Pennsylvania grade bright stocks, neutrals, and other lubricating oils compiled by National Petroleum Assn. (usually published on this page of N.P.N.) have been discontinued by the association, and, beginning with January the figures will be compiled on a *monthly* basis, according to an announcement by N.P.A.

"The same practice of distributing these reports will be followed as in the past, that is, all compilations sent to reporting companies will be concurrently sent to government agencies and the trade press," the N.P.A. said. The monthly report, when available, will be published on this page.

Weekly Changes in U. S. Crude Oil Stocks*

(Thousands of Barrels)

Grade or Origin	Dec. 24	Dec. 31	Jan. 7	Chg. from Dec. 31
Pennsylvania grade	5,865	5,770	5,831	+ 61
Other Appalachian	1,210	1,210	1,241	+ 31
Lima-Michigan	1,405	1,434	1,432	— 2
Illinois-S. W. Indiana	11,227	11,332	11,634	+302
Arkansas	2,859	3,058	2,669	—389
Kansas	6,900	6,790	6,726	— 64
Louisiana	13,925	13,445	13,761	+316
Northern	5,396	5,342	5,417	+ 75
Gulf Coast	8,529	8,103	8,344	+241
New Mexico	7,080	7,176	7,034	—142
Oklahoma	71,053	70,718	70,422	—296
Texas	89,955	90,989	90,210	—779
East Texas	18,293	18,980	19,007	+ 27
West Texas	17,288	17,137	16,981	—156
Gulf Coast	20,083	19,881	20,015	+134
Other Texas	34,291	34,991	34,207	—784
Rocky Mountain	20,493	20,590	20,665	+ 75
California	36,661	37,249	37,370	+121
Foreign	3,085	3,263	3,330	+ 67
Total U. S. Refinable	271,718	273,024	272,325	—699
Heavy in California	16,782	16,699	16,382	—317

*Compiled by U. S. Bureau of Mines.

Co-operatives' Employes Are Under Wage-Hour Law

N. P. N. News Bureau

WASHINGTON, Jan. 14. — Wage-Hour Administrator Andrews has ruled that employes of co-operatives, even those owning stock in the enterprise, are *not* exempted from the minimum wage and maximum hours prescribed in the federal wage-hour law which became effective Oct. 24. Text of Andrews' ruling follows:

Text of Ruling

"The question has been asked whether cooperatives are employers and members who work for them employes within the terms of the Fair Labor Standards Act. The term cooperative is used to describe various types of business organizations differing in form and method of operation. Accordingly, no statement can be made to cover all types of organizations calling themselves cooperatives. However, it may be said generally that no justification can be found for concluding that member-workers of cooperatives, otherwise covered, are not entitled to the benefits of the Act.

"Any doubt which exists must be based on the notion that cooperatives are, in effect, partnerships and that no employer-employee relationship exists between them and the members who work for them. Although it is possible that there may be 'workers' cooperatives in which the interests of the members as workers are in all respects the same as their interests as proprietors and in which the usual characteristics of the employer-employe relationship do not exist, and hence in which the worker-members would not be employes within the meaning of the Act, it is to be noted that cooperatives are commonly separate entities in which the usual characteristics of the employer-employe relationship exist as between them and worker-members. Cooperatives are generally in the corporate form with interests distinct from those of their members. Though their workers may be stockholders, as workers they are subject to the usual control and discipline of the corporate employer; they work at the discretion of the cooperative's board of directors or other managerial body. Their concern, as workers, with wages, hours of work and other working conditions, is quite distinct from and may be much greater than their interest, as stockholders, in profits or dividends.

"The Fair Labor Standards Act provides no express exemption in favor of cooperatives as do some other statutes and the provisions in the Act defining the employer-employe relationship cover the relation of the ordinary cooperative to its workers regardless of whether or not they are stockholders or members."

Coming Meetings

Tennessee Oil Men's Assn., Peabody Hotel, Memphis, Jan. 23.

Northwest Petroleum Assn. (North Dakota Division), Elks Club, Fargo, N. D., Jan. 23, 24.

Oil Trades Assn. of New York, quarterly meeting, Waldorf-Astoria Hotel, New York, Jan. 24.

Northwest Petroleum Assn. (Minnesota Division), Lowry Hotel, St. Paul, Minn., Jan. 26 and 27.

Ohio Petroleum Marketers Assn., Deshler-Wallick Hotel, Columbus, Feb. 7, 8, 9.

Illinois Petroleum Marketers Assn., annual convention, Pere Marquette Hotel, Peoria, Ill., Feb. 8-10.

Kansas Oil Men's Assn., 25th Anniversary, Wichita, Kan., Feb. 13, 14.

American Institute of Mining and Metallurgical Engineers, Engineering Societies Bldg., New York, Feb. 13 to 16.

Kentucky Petroleum Marketers Assn., 13th annual meeting, Brown Hotel, Louisville, Feb. 14, 15.

Assn. of Highway Officials of North Atlantic States, 15th annual meeting, Hotel Pennsylvania, New York, Feb. 15, 17.

Wisconsin Petroleum Assn., annual meeting, Schroeder Hotel, Milwaukee, Feb. 21, 22, 23.

American Society of Mechanical Engineers and Louisiana Engineering Society, joint meeting, St. Charles Hotel, New Orleans, Feb. 23, 24, 25.

North Texas Oil & Gas Assn., annual meeting, Wichita Falls, Tex., Feb. 25.

12th National Asphalt Conference, auspices The Asphalt Institute, Biltmore Hotel, Los Angeles, week of Feb. 27.

Iowa Independent Oil Jobbers Assn., Hotel Fort Des Moines, Des Moines, March 1, 2, 3.

American Society for Testing Materials, committee week and regional meeting, Deshler-Wallick Hotel, Columbus, O., March 6-10.

Indiana Independent Petroleum Assn., spring convention and refiners' and suppliers' exhibit, Hotel Severin, Indianapolis, March 14-16.

American Petroleum Institute, Division of Production, Southwest District, Plaza Hotel, San Antonio, March 16, 17.

Western Petroleum Refiners Assn., annual meeting, San Antonio, March 20 to 22.

Oil Trades Assn., of New York, annual meeting, Waldorf-Astoria Hotel, New York City, March 21.

American Assn. of Petroleum Geologists, Oklahoma City, Okla., March 22, 23, 24.

American Chemical Society, Baltimore, Md., April 3-7.

National Petroleum Assn., 36th semi-annual meeting, Hotel Cleveland, Cleveland, O., April 13, 14.

Oil-World Exposition, Houston, Tex., April 24 to 29.

American Institute of Mining & Metallurgical Engineers, Open Hearth Conference, Cleveland, April 26, 27, 28.

Petroleum Electric Supply Assn. and Petroleum Industry Electrical Assn., Rice Hotel, Houston, Tex., May 2-4.

Natural Gasoline Assn. of America, Hotel Tulsa, Tulsa, May 3-5.

American Petroleum Institute, 9th mid-year meeting, Roosevelt Hotel, New Orleans, La., May 15 to 18.

World Automotive Engineering Congress, sponsored by S.A.E., for New York, May 22-26; Indianapolis, May 30; Detroit, May 31-June 2; San Francisco, June 6-8.

Pennsylvania Grade Crude Oil Assn., annual meeting, Hotel Hershey, Hershey, Pa., June 15, 16.

13th International Congress of Carbide, Acetylene, Oxy-Acetylene Welding & Allied Industries, Munich, Germany, June 25 to July 1.

American Society for Testing Materials, 42nd annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 26 to 30.

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Lubricating . . .

THE 1939 AUTOMOBILES

'39 Customers in '39 Cars

The oil companies and their stations are more fortunate than most lines of business that sell either merchandise or services. Their customers of necessity must come to the service stations two or three times a week to buy motor fuel; their needs for what the oil companies have to sell are apparent to the alert station man; and, a point which is frequently overlooked, those customers can quickly and easily be classified as sales prospects.

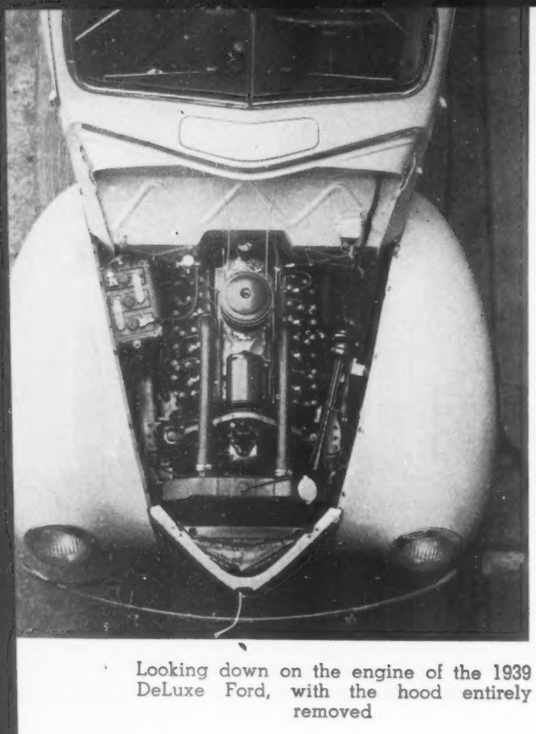
The man whose car, even an old model, gives every evidence of having good care obviously is a better prospect for regular lubrication and oil changes, wash jobs, and the replacing of the necessary accessories than the man whose car is being neglected as long as it will run.

The Grade A sales prospect at the station, however, is the owner of one of the 1939 new cars. Pride of ownership in a new automobile is much greater now, when most people only trade their old car in every two or three years, than it used to be. That new owner likewise is more intent on giving that New Car the care it needs to keep it functioning efficiently at a long period.

To pass up a New Car owner at the station, aside from his gasoline and oil purchases, as not being a good sales prospect, is to overlook a good sales prospect throughout 1939. He may be sold premium gasoline, if he is convinced his driving pleasure will be increased thereby. He will change his crankcase oil and lubricate his car regularly, if he is shown the protection he is thereby giving his new purchase. That New Car owner also is a good bet for those mechanical type accessories which are not standard equipment with new cars today, but which do add materially to driving pleasure and even comfort.

It is to the business from the 1939 New Car owners that this issue of NATIONAL PETROLEUM NEWS is dedicated. In following pages readers will find, edited in a new style to save their reference time, all the servicing features of all the New Cars in which the oil company and station man is interested. Other special articles tell how to sell the new car owner and suggest what that new car owner may buy, depending on the make of car he is driving.

As the New Car Owners appear on the station drives in increasing numbers, in coming weeks and months, every man who has to do with their servicing may well thrill at his part in bringing to Americans the marvelous, low-cost automotive transportation they enjoy, as compared with all other parts of the world.



Looking down on the engine of the 1939 DeLuxe Ford, with the hood entirely removed

Changes in Servicing

John W. Thompson
N. P. N. Staff Writer

For the service station operator, charged with the responsibility of properly lubricating the nation's automobiles, here's a "rapid-fire panorama" of the 1939 models:

Three additional cars equipped with hypoids.
Steering column shift levers on all but seven cars.
Electric control widens overdrive range.
Steering linkages simplified.
Fluid-drive transmission introduced.
Two more cars adopt independent front wheel spring.
Thirteen cars now have alligator-type hoods.
Four more cars place battery under the hood.

THE new year finds two names removed from the automotive roster. Pierce Arrow, an old established manufacturer, has discontinued production, and the Terraplane name has been dropped from the Hudson line, although the car is being continued with improvements under a Hudson name.

New faces in 1939 include the Ford-built Mercury, the Overland, and the Hupp Skylark, a six-cylinder car with a body shaped from the former Cord dies. At this writing, the Skylark is not yet in production. Hupp plans to introduce a four-cylinder car soon. In addition, both Pontiac and Oldsmobile have introduced smaller Sixes to augment their regular Six and Eight models for 1939.

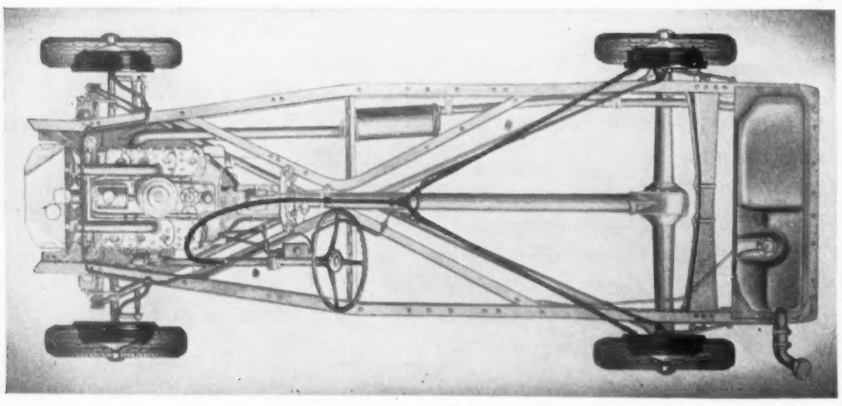
Thirteen makes of cars are now equipped with alligator-type hoods, with Hudson hinging its hood at the front on all models as a safety precaution, similar to the method introduced on the Hudson 112 last year. Cars now using this type of hood for the first time include; Hudson (used last year on 112), Mercury, Oldsmobile, Pontiac, Overland, and Nash. With the possible exception of the DeLuxe Ford and Mercury, station attendants will find some engine parts difficult to reach on these cars with alligator hoods, and a flashlight will prove to be a handy "lubrication tool."

The list of battery-under-the-hood cars continues to grow. Additions for 1939 include Studebaker, Bantam, Mercury, and Overland. On the Studebaker the battery is on the left side, and on the other three on the right side. The LaSalle battery, located under the hood last year, is now found under the left front floor board.

The hypoid rear axle still continues to add new users, with Pontiac, Olds and Nash being the 1939 converts. On the 1939 Nash, only the sedan models are hypoid-equipped. The few remaining cars not equipped with hypoid axles are the Bantam, Ford, Hudson, Mercury, Willys, Overland, and Hupmobile Six.

With the introduction of hydraulic brakes on the Ford and Mercury, only the Bantam, the large Lincoln V-12, and the Willys remain with mechanical brakes.

From a popular standpoint, the steering column shift lever is perhaps one of the most notable features of the 1939 cars, although in the great majority of cases no lubrication of these parts is required. All 1939 cars except Bantam, Ford, the Lincolns, Mercury, Overland, Plymouth (Roadking), and Willys, are equipped with the steering column shift lever either as standard or optional equipment. The Chevrolet shifting mechanism is operated in con-



The 1939 Ford and Mercury braking system. The foot brake is of the hydraulic type to all four wheels, and the hand brake is mounted under the left side of the instrument panel and actuates the rear brakes through cables

Points on the New Cars

junction with a vacuum booster cylinder.

Hudson continues with its "electric hand" gear shift as optional equipment, and the automatic transmission, similar to that used on Olds and Buick optionally in 1938, is continued on the same basis only on Olds for 1939.

The vacuumatic gear shift device, offered optionally on Nash, Graham and Studebaker in 1938, has been discontinued on these cars.

The most important transmission improvement is the Warner Gear overdrive unit now offered on Studebaker, Chrysler, DeSoto, Nash, Graham, Hupmobile and Packard. This new overdrive is brought into operation when the car reaches a speed of 30 miles per hour, where formerly it became operative at 40 m. p. h. or more. An additional feature is that the new overdrive permits returning to direct drive at any time the operator desires.

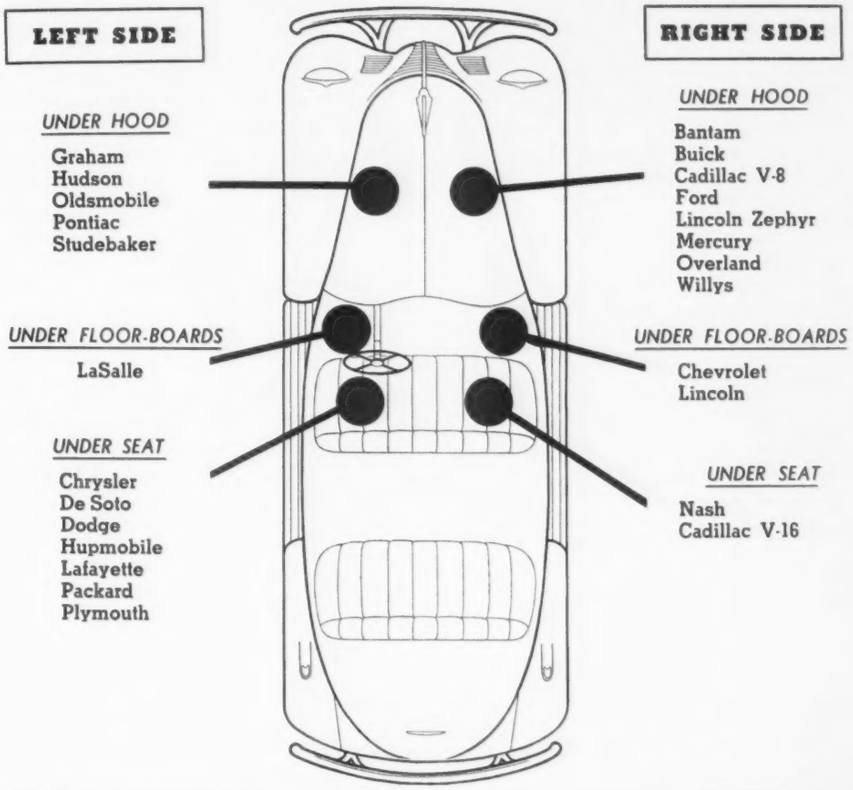
Chrysler has introduced a fluid drive transmission, which is standard equipment on the Chrysler Custom Imperial only and which will transmit power to the rear wheels at greatly varying speeds without the aid of the shifting operation. Details of operation of the drive are explained elsewhere in this issue, and its oil requirements are outlined under the Chrysler car description on the following pages.

Transmissions, in general, require the new SAE 140 gear lubricant for summer and SAE 90 for winter, but there are some interesting exceptions. Buick, for example, recommends an SAE 90 extreme pressure lubricant for its transmission, while Cadillac and LaSalle specify that an SAE 90 hypoid lubricant, as used in the rear axle, may also be used in the transmission. For its overdrive transmission, Packard has been recommending since Dec. 1 that a Packard-approved SAE 90 hypoid oil be used. Chevrolet recommends an SAE 40 or 50 engine oil be used in the transmission if SAE 90 is not available.

Packard, after its 1938 recommendation of chassis lubrication every 5000 miles, now specifies that chassis points be serviced every 2000 miles.

Simplification of steering linkages has brought about slight re-location of lubrication fittings. On the Olds and Pontiac for 1939, for example, the intermediate steering arm has been eliminated. Instead, in addition to the conventional pitman arm, there is an idler arm attached to the right side of the car frame. These two arms are connected by a rod or relay link to which

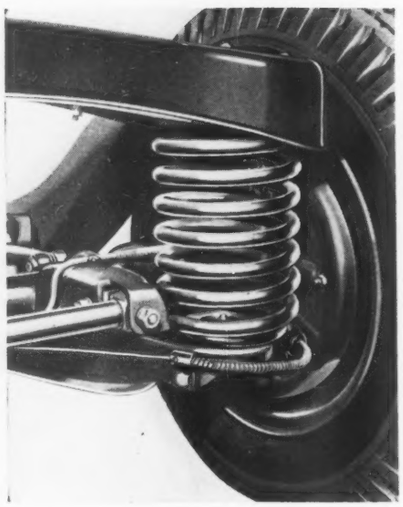
Here's Where They Are On The 1939 Cars



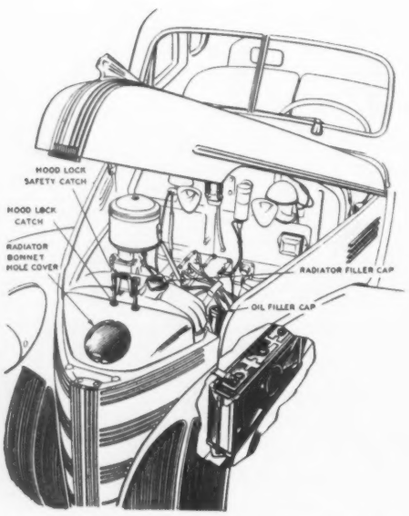
Alphabetical Listing of Battery Locations

Car	Location	Side
American Bantam	Under Hood	Right
Buick	Under Hood	Right
Cadillac V-8	Under Hood	Right
Cadillac V-16	Under Seat	Right
Chevrolet	Floor Boards	Right
Chrysler	Front Seat	Left
Chrysler Custom Imperial	Front Seat	Left
De Soto	Front Seat	Left
Dodge	Front Seat	Left
Ford Standard and DeLuxe	Under Hood	Right
Graham	Under Hood	Left
Graham Supercharger	Under Hood	Left
Hudson 6	Under Hood	Left
Hudson 8	Under Hood	Left
Hupmobile	Under Seat	Left
LaSalle	Floor Boards	Left
Lincoln	Floor Boards	Right
Lincoln Zephyr	Under Hood	Right
Mercury	Under Hood	Right
Nash-Lafayette	Front Seat	Left
Nash 6	Front Seat	Right
Nash 8	Front Seat	Right
Oldsmobile 60 and 70	Under Hood	Left
Oldsmobile 80	Under Hood	Left
Overland 61	Under Hood	Right
Packard 6	Front Seat	Left
Packard 8	Front Seat	Left
Packard 12	Front Seat	Left
Plymouth	Front Seat	Left
Pontiac 6 and 8	Under Hood	Left
Studebaker 6 and 8	Under Hood	Left
Willys 48	Under Hood	Right

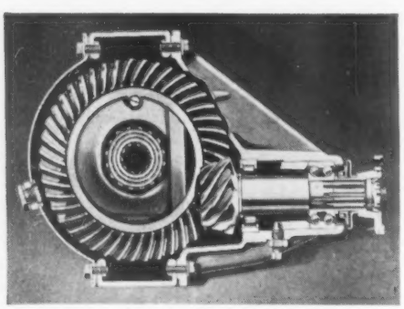
Diagram and listing of the battery locations on the 1939 models. (Courtesy Electric Storage Battery Co.)



The coiled rear spring, shown here on the 1939 Buick, has also been adopted by Oldsmobile for 1939



The alligator-type hood, adopted by Pontiac for 1939, shows the accessibility which this type of hood provides for minor servicing



The hypoid rear axle has been newly adopted by Oldsmobile, Pontiac, Nash and Nash Lafayette for 1939. The Pontiac axle is shown here

the inner ends of the two tie rods are attached. On the Chevrolet Master DeLuxe, the pitman arm is connected directly to the tie rods, the drag link is eliminated and the left steering knuckle arm is considerably simplified in shape.

Dodge and Plymouth have adopted independent front wheel springing, the design being quite similar to that used on Chrysler and DeSoto last year. While this change eliminates six shackle lubrication points, it replaces them with 14 points requiring a chassis lubricant every 1000 miles.

Chevrolet has discontinued the enclosed Dubonnet type of front wheel springing on its Master DeLuxe model in favor of the parallel link type with the whole assembly being mounted on the front cross member as a unit. With the exception of the Master Chevrolet, all General Motors cars now use this general method of front springing.

Oldsmobile has adopted coiled rear springs, following the Buick pattern of 1938. Buick also continues to use this type of rear springing. This Oldsmobile change eliminates six former shackle lubrication points.

Rubber continues to play an increasingly important part in the design of the modern motor car. In the LaSalle front wheel suspension, rubber is used at four places at the inner ends of the lower control arms and thus eliminates four lubrication points. Rubber-bushed rear shackles are used this year on the Cadillac 61, LaSalle, Graham, Overland, and Packard (except the Twelve). Rubber is used liberally, too, in the bushings at the ends of ride stabilizers and sway eliminator bars which are widely used on 1939 cars.

Rubber continues to be used for engine mountings and for insulating the body from the frame. In synthetic form, it is used in floor mats and running board mats, and as a compound it is used to completely seal the floor of the body against heat, cold, dust, and gases.

The race for more mileage on less crankcase drains appears to have subsided for the moment, with most of the manufacturers holding their ground. Studebaker continues to recommend a crankcase drain and refill four times a year, while Lincoln-Zephyr for 1939 still specifies an oil change every 5000 miles.

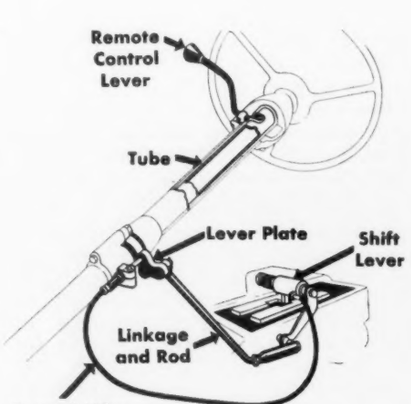
Nash, formerly recommending an oil change every 1000 to 1500 miles, now specifies every 2000 miles. Packard, formerly recommending a change every 2000 to 3000 miles, now states every 2000 miles. The 1939 oil drain recommendations of other car manufacturers, in general, follow their 1938 specifications.

CARS EQUIPPED WITH STEERING WHEEL SHIFT LEVER

S—Standard
O—Optional

Hudson	S
Nash	O
Graham	O
Studebaker	S
DeSoto	S
Dodge	S
Chrysler	S
Plymouth Deluxe	S*
Chevrolet	O†
Pontiac	S
LaSalle	S
Cadillac	S
Olds	S
Packard	S
Buick	S
Hupp	O

*Not available on Plymouth Roadking.
†Booster type.



The steering wheel shift lever is now offered, either optionally or as standard equipment, on the majority of the 1939 cars, the DeSoto shift lever is shown here

• • •

NOTE—On the pages immediately following are listed the important lubrication changes on each of the 1939 cars, as well as mechanical improvements. The information is assembled and presented in such a way as to enable the station operator to quickly determine how the 1939 models differ from those of 1938.

PLAN NOW
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EL DORADO, ARK. **T. H. BARTON, Pres.**

THE SAFE OIL FOR CARS, TRUCKS, TRACTORS AND DIESELS

Bantam . .

Major Lubrication Changes

Fan shaft—

No lubrication required.
On the 1938 Bantam, the fan shaft required a chassis lubricant every 2000 miles.

Capacities—

Crankcase—6 pints (formerly 5 pints).

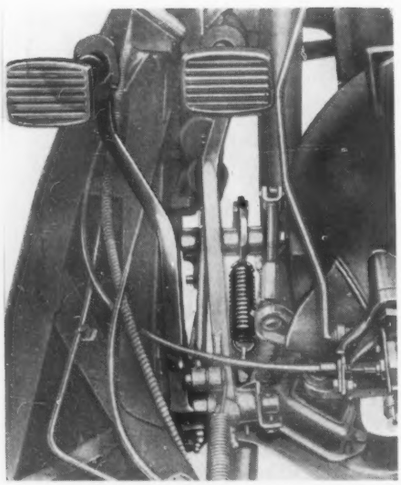
Major Engineering Changes

Smooth acting clutch.
Easier shifting transmission.
Shorter turning radius.

"Duo-rate" springing reduces overall height 3 inches.

Buick . . .

Major Lubrication Changes



Clutch and brake pedals are mounted on the frame of the 1939 Buicks. All models this year have a clutch booster spring which reduces clutch pressure

Water pump—

Requires no lubrication.
(In 1938, required an engine oil every 1000 miles.)

Oil filter—

Provided on models having heavy duty oil bath air cleaner. Filtering element should be renewed when oil on gauge stick appears dark, and under ordinary usage should be changed about every 8000 miles.
(In 1938, no oil filters were used.)

Transmission—

Use an SAE 90 extreme pressure lubricant for temperatures not lower than 10 degrees below zero, and an SAE 80 extreme pressure lubricant for lower temperatures.
(In 1938, an SAE 160 or 140 gear lubricant was recommended for summer, and an SAE 90 for winter).

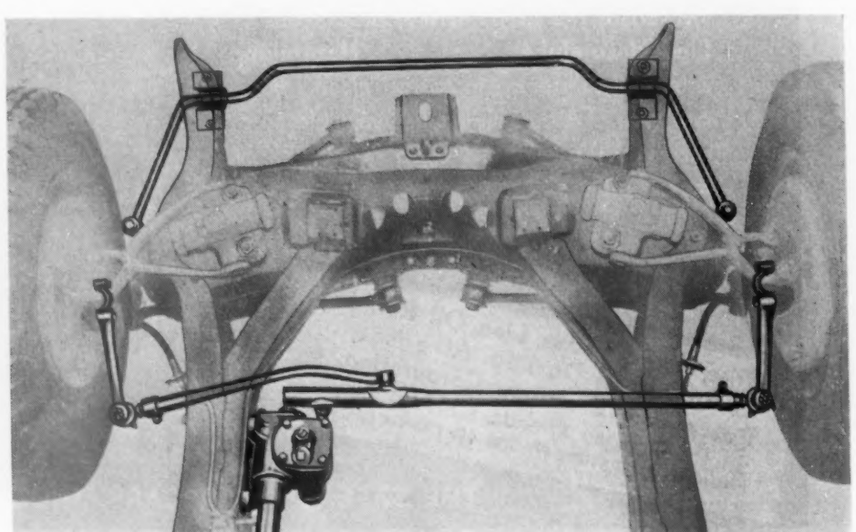
Pedal equalizer shaft—

Use chassis lubricant every 1000 miles.
(In 1938, this lubrication point was found only on the Series 40 Buick, but for 1939 it is on all models).

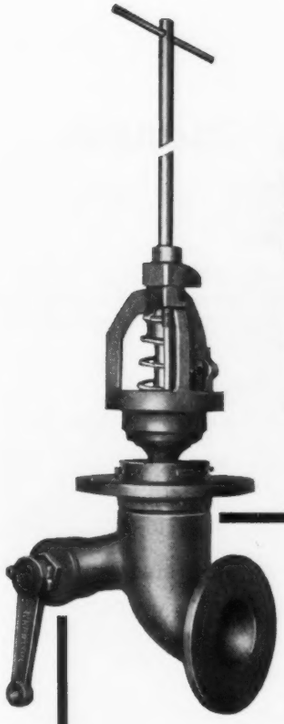
Front end spring suspension—

On Series 40 and 60, the lower control arm ends are rubber bushed, eliminating lubrication points at these locations.
(In 1938, all models had lower control arm ends which required a chassis lubricant every 1000 miles.)

Buick engines are equipped with a fuel conditioning system which assures a steady supply of fuel to cylinders. An improved accelerator pump furnishes proper mixtures for quick acceleration at slow speeds, and a positive acting choke, built as an integral part of the fuel conditioner, eliminates extra linkage to the choke valve



Slight geometric changes in the front end design now put the stabilizer bar ahead of the front wheel center line on the Series 40 and 60 Buicks



If you want SIMPLICITY OF MAINTENANCE

here it is!

Save time and money in upkeep by specifying this new Wheaton Type 210 Emergency Valve

● Here's an emergency valve that is a big saver of time and money because its big feature is *simplicity of maintenance*—a feature that makes it easier to use than any other type of emergency valve.

The valve plunger disc can be renewed by just inserting the shaft of the wrench in the center of the valve cage. A twist of the wrist, and the valve cage can be disengaged and the entire valve cage and plunger assembly removed. There is no need to steam out the tank, or remove the entire valve from the piping and compartment outlet.

Type 210 has a streamlined valve cage which prevents restriction in the flow of liquid entering the valve. Actual tests proved 95% efficiency in flow characteristics at low head pressures. Spring-loaded, self-tightening packing gland permits automatic absorption of wear on the packing by tension of spring between two sets of glands and packings.

Modernize your truck tanks with Type 210—the emergency valve that is *easy to use* and *maintain*—the emergency valve that pays for itself over and over with *lower upkeep cost.*

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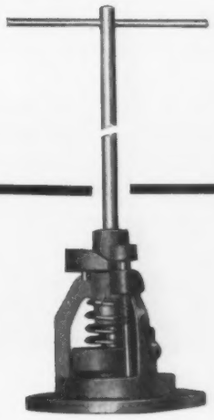


Wheaton Type 211 Emergency Valve

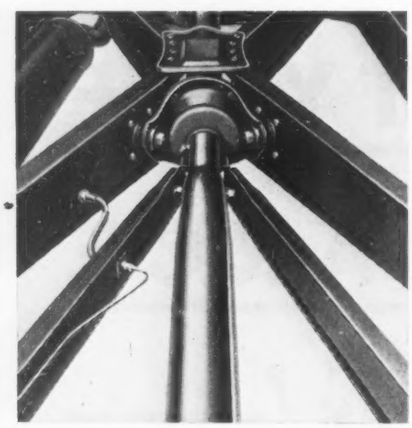
Type 211 has the same features as Type 210—the same *ease of operation* and the same *simplicity of maintenance.* The only difference is that Type 211 is designed for installation in trucks having overhead control operation, whereas Type 210 is for underneath operation. As in Type 210, the entire mechanism can be removed with a twist of the wrist—without steaming out the tank, or removing the entire valve.

Wheaton

FAUCETS•VALVES•JOINTS•COUPLINGS•FILLERS•NOZZLES•FITTINGS

Buick . . .

Continued



The front end of the torque tube on the Buick 40 and 60, showing the rubber insulation and channel strut rods. A pressure gun fitting at the end of the torque tube takes a chassis lubricant every 1000 miles on these two models

Major Engineering Changes

Automatic transmission discontinued.

Hypoid rear axle—

Continued in 1939, with two optional gear ratios available on the Series 40 and 60. For the Series 40, ratios of 4.4 to 1 and 3.9 to 1 are available. For the Series 60, ratios of 3.9 to 1 and 3.6 to 1 are available.

Water pump—

Made leak-proof by the use of a new carbon block type of shaft seal, and in conjunction the shaft runs in a pre-lubricated ball bearing assembly.

Clutch—

Series 40 clutch is entirely new, with an assembly of only 9 parts, compared to 41 parts in the 1938 assembly.

Hood latch—

Concealed in side louvres.

Oil filter—

On those models equipped with heavy duty oil bath air cleaner.

Front spring suspension—

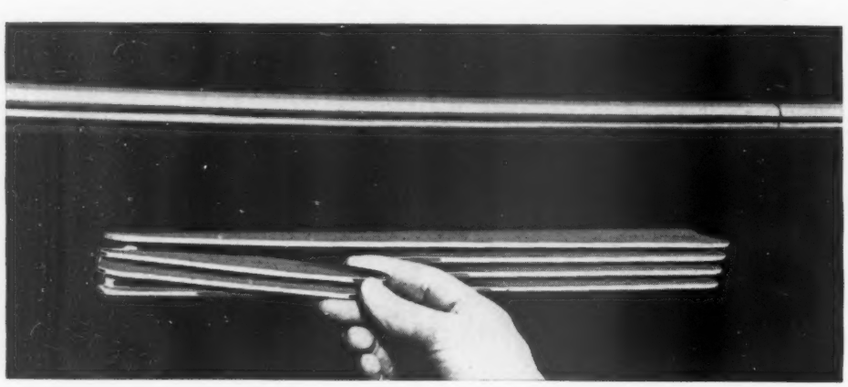
On Series 40 and 60, lower control arm ends are rubber bushed.

Engine—

Carburetor accelerator pump furnishes proper fuel-air mixtures for fast acceleration and for different loads and air temperatures.

Automatic choke is integral part of carburetor, eliminating linkage.

Intake manifolds are shaped to insure even distribution of fuel mixture to all cylinders.



The hood latches on the 1939 Buicks are concealed in the side louvre design. Inserting the finger in the small opening and pulling out releases the latch

Cadillac and LaSalle . . .

Major Lubrication Changes

Front wheel suspension—

LaSalle and Cadillac 61—

8 points on right side, and 7 on left side, all taking chassis lubricant every 1000 miles. Inner ends of lower suspension arms are rubber bushed.

Transmission—

SAE 90 hypoid lubricant, as used in the rear axle, may also be used in the transmission.

(In 1938, an SAE 90 or an SAE 90 e.p. gear oil were specified, with no reference to a hypoid lubricant.)

Check level of transmission lubricant every 1000 miles.

(In 1938, every 3000 miles was recommended.)

Universal joint spline—

Lubrication point on LaSalle located at front of drive shaft.

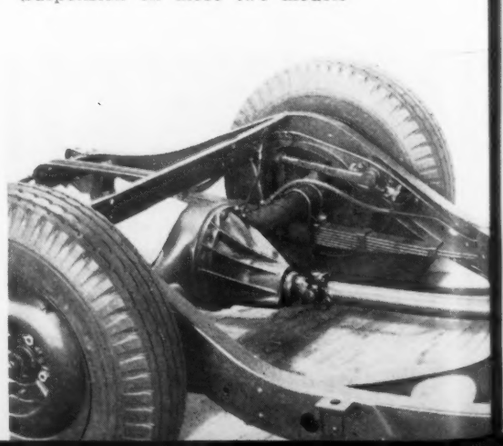
Rear spring shackles—

These points are rubber-bushed on the LaSalle and Cadillac 61, and require no lubrication.

Clutch release rocker shaft—

One fitting is provided here which

On the LaSalle and Cadillac 61, springs are mounted higher than formerly and are located inside the frame. The shackles are rubber-bushed, eliminating the need of lubrication for the entire rear spring suspension on these two models



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takes a chassis lubricant every 1000 miles.
(In 1938, this point was not provided.)

Pedal shaft—

On the Cadillac 60S and 61, a chassis lubricant fitting is provided which is to be serviced every 1000 miles.

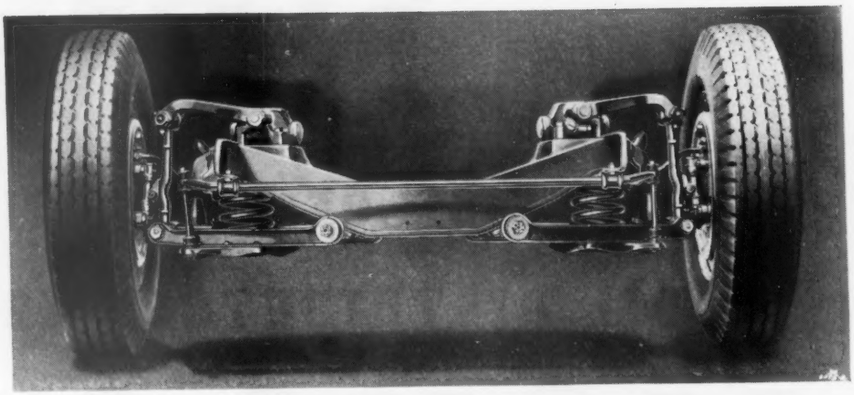
Capacities—

Rear Axle

Cadillac 61—5 pts. (was 6 pts.)
Cadillac 75—6½ pts. (was 6 pts.)

Cooling system

Cadillac 60S—24½ qts. (was 24 qts.)
Cadillac 61 and 75—24½ qts. (was 25 qts.)



Rubber bushings have been adopted at the inner ends of the lower control arms of the 1939 LaSalle and Cadillac 61. The arms and kingpin supports have been redesigned for increased strength and to aid road clearance

Major Engineering Changes

Engine—

Re-location of side engine supports places torque reaction below operating speed ranges, to eliminate vibration that customarily accompanies acceleration through "critical speeds."
It is claimed that oil consumption will be reduced by the development of a new top piston ring, narrower and deeper than the previous design. All rings are treated with ferrous oxide.
A velocity suction ventilating system is employed, in which the velocity of the car motion creates a suction that draws the gases from the ventilating outlet beneath the engine at the rear.

Rear Springs—

On the LaSalle and Cadillac 61, the ends of the leaf springs are mounted higher and inside the frame, providing a better control of axle weight.

Choke—

The former electric choke has been replaced by a choke actuated by exhaust manifold temperature.

Hood—

Continuing the alligator type, the raising operation has been facilitated by two new devices. A support is now located at the center of the hood. The hood latch is placed under the radiator ornament as before, but it is no longer necessary to release the safety catch when opening the hood.

Chevrolet . . .

Major Lubrication Changes

Front end spring suspension—(DeLuxe model)

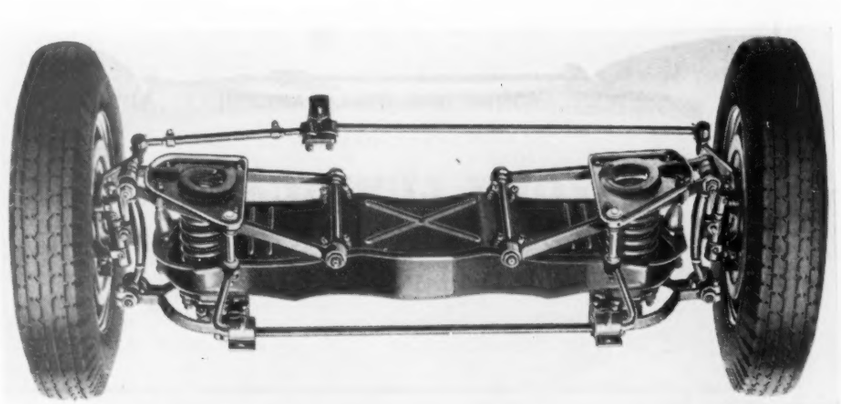
Wishbone type, replacing the former enclosed knee action units, on the DeLuxe model only. Each lower control arm has two pressure gun fittings at the front and one at the rear. Each upper control arm has one pressure gun fitting at the front and one at the rear. These take a chassis lubricant every 1000 miles.

Steering mechanism — (DeLuxe model)

Tie rod split into two sections, with a pressure gun fitting on each end of both sections. These take a chassis lubricant every 1000 miles.
(In 1938, a single tie rod was used with a lubrication fitting on each end. This design is continued on the 1939 Master Chevrolet.)
Steering connecting rod eliminated, removing one lubrication fitting.

Transmission—

Use an SAE 90 transmission lubricant, but if not available, an SAE 40 or 50 engine oil may be used, "as well as lubricants other than transmission lubricants which meet the viscosity and channeling requirements of SAE 90."
(In 1938, no substitute was recommended for use when SAE 90 was not available.)



Chevrolet has adopted this wishbone type of front spring suspension on its DeLuxe models, replacing the former enclosed knee action units. The steering tie rod, formerly in one piece on this model as well as on the 1939 standard model, has been split into two sections, and the steering connecting rod has been eliminated

You can be sure

Do you think you can make money this year selling straight-run or half-cracked gasoline, especially now that octane standards have gone up?

Don't bet on it

Dubbscracking is the way to make good gasoline—that's sure

U. O. P. catalytic polymerization increases yield and boosts octane rating

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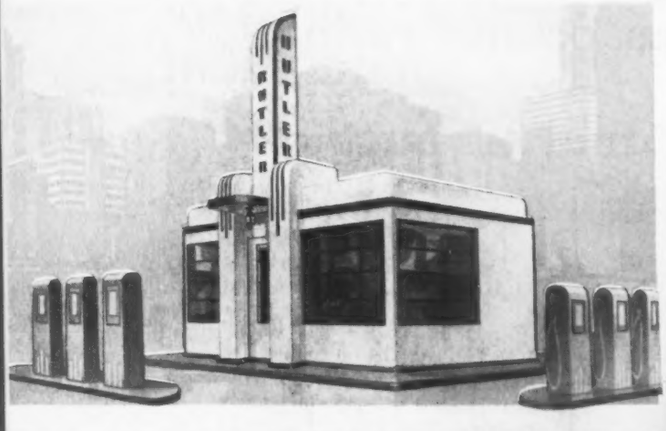

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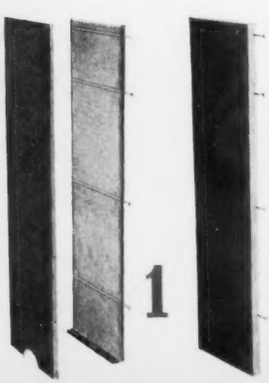
The double-steel-panel structural system of Butler Boulevard Stations gives them a smooth steel surface on the interior and on the exterior. It is as easy to keep spic and span clean as the smooth gleaming surface of a modern motor car. Your operators can "housecleanse" with their car washing equipment — make service station cleanliness an easy chore.

ONLY 5 KINDS OF PREFABRICATED DOUBLE-STEEL PANEL UNITS LOCK TOGETHER INTO THE **BUTLER** STRUCTURAL SYSTEM OF GREATER STRENGTH AND DURABILITY!



BUTLER *Boulevard Stations* **STABILIZE**

AND EASIER TO MAINTAIN, ARE STATIONS OF *STEEL *INSIDE AND OUT!

INTEGRAL STRUCTURAL SYSTEM ASSURES STRENGTH AND DURABILITY

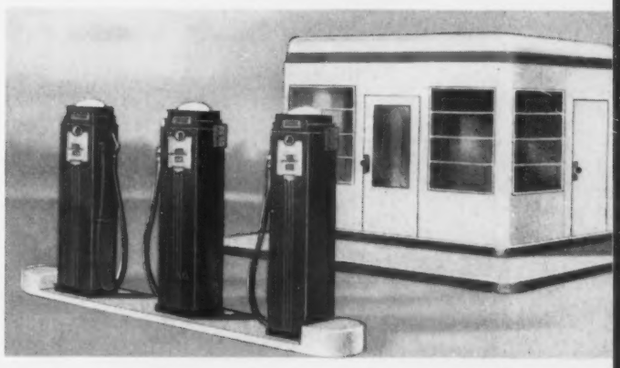
Shown below are the steel units or shapes used in constructing Butler Boulevard Stations. They are few in number—only five kinds. Fig. 1 shows two views of the basic unit. It is a double-steel-panel, in itself one of the strongest structural shapes. Every 24 inches, where these butt together, a 3⅜" x 4" I-beam column is formed in the wall. The area of each is 0.9 sq. inch, the radius of gyration equals 1.46. On 24 inch centers, they form a rigid and substantial structural steel frame integral with the steel walls. Fig. 2 shows an outside and inside view of the curved corner panel. Figs. 3 and 4 show factory assembly of wall sections carrying steel windows and doors. Fig. 5 shows the double-steel-panel unit which forms the steel ceiling and steel roof deck. United by welded-on roof shear plates and roof truss rods, they have more than ample strength to span and carry twice the roof load apt to be imposed.

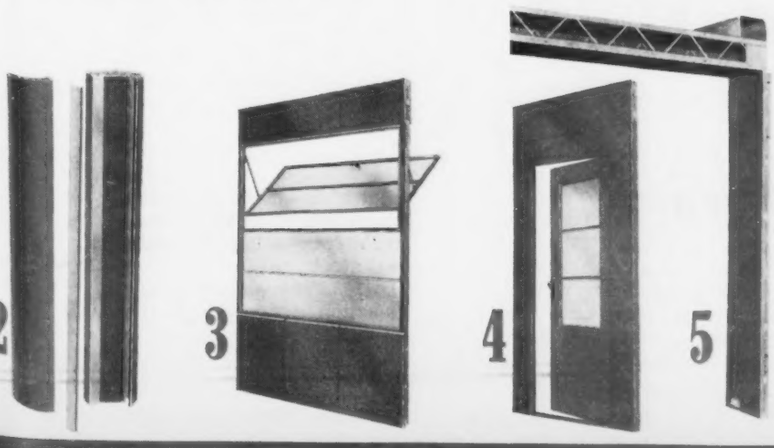
A SIMPLE LOCKING TOGETHER SPEEDS ERECTION

In Fig. 1, note the pipe struts within the double steel panel and the steel tie rods that pass through them. These lock the double-steel-panel wall units together into walls of great strength and rigidity. All locking rods terminate in the curved corner panel (Fig. 2)—are concealed behind the removable steel access panel.

BUILT-IN INSULATION

At the factory, a highly efficient blanket insulation is bonded within each double-steel-panel wall unit. (See Fig. 1). Bonded to the steel deck is a 1" thickness of rigid insulation. This insulation with the dead air space sealed within the wall-thick steel panels, gives insulation value comparable to good home construction.





BEAUTIFUL NEW CATALOG SENT ON REQUEST ONLY

In it, 20 photographs show the flexibility of Butler design. A dozen engineer's drawings in perspective give you every detail of construction—show the simplicity of erection. Printed in four colors, it reveals the striking beauty and dignity of Butler Boulevard Stations. Before you build another service station see how the modernism of steel construction will stabilize your station cost. Request your copy NOW. The printing is limited.

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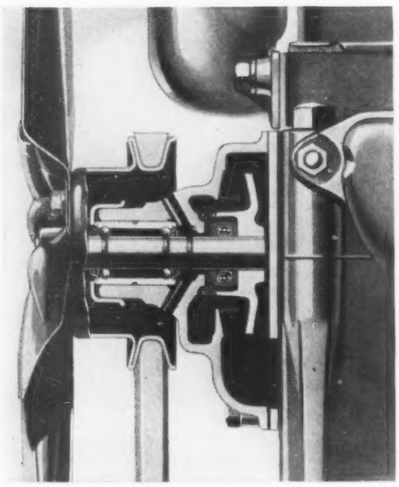
Chevrolet . . .

Continued



Self-adjusting and permanently sealed and lubricated, this water pump was first provided on the Chevrolet in May, 1938, and continues on the 1939 models

Major Engineering Changes

Front end spring suspension—

On the DeLuxe model, the enclosed knee action units have been replaced by the open coil spring, wishbone type of suspension similar in principle to other General Motors cars. Weighs 43 pounds less than former unit.

Steering mechanism—

On the DeLuxe model, the tie rod has been split into two sections, and the steering connecting rod has been eliminated.

Clutch—

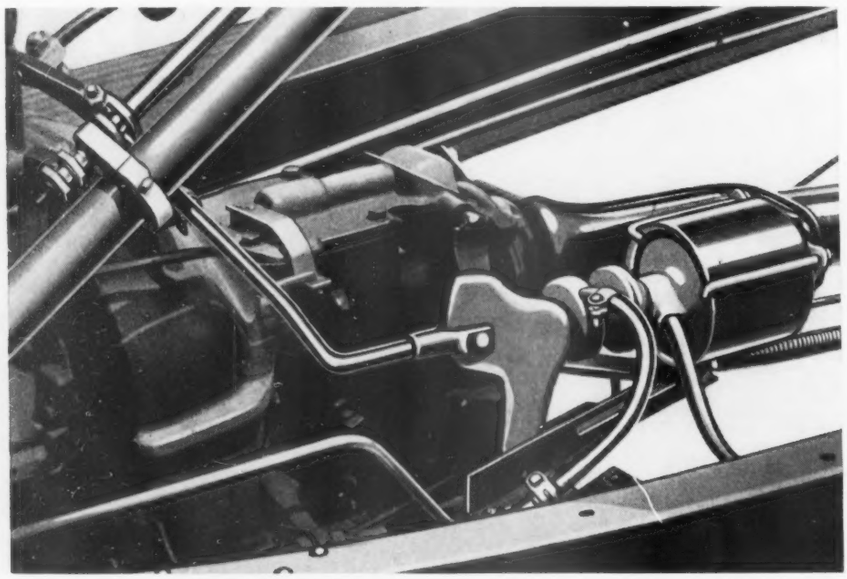
Radial vanes formed in the clutch pressure plate permit that member to function not only as a unit of the clutch mechanism, but also as an agitator, circulating air throughout the housing. This keeps the clutch constantly cooled while the car is in motion.

Water pump—

Starting with production in May, 1938, a ball bearing type water pump was used which requires no lubrication, and this feature is continued on the 1939 models. The shaft and double row ball bearing are integral on the new pump.

Steering column shift lever—

Optional equipment on both models. Operated in conjunction with vacuum booster. Can also operate manually without booster.



The "business end" of Chevrolet's new vacuum-operated gear shift mechanism. The shift lever is located on the steering column, and the device is optional equipment at extra cost on all models. The shifting can be done manually when the engine is not running to provide a vacuum for the booster

Chrysler and DeSoto . . .

NOTE—Except where indicated, the lubrication requirements of the DeSoto and Chryler are identical.

Major Lubrication Changes

Hypoid rear axle—

Drain, flush and refill every 15,000 miles. (Formerly 10,000 miles.)

Steering column shift lever—

Rub a thin film of short fibre wheel bearing grease (medium) onto the gear shifting lever fulcrum slide at the steering wheel, and water pump grease onto the clover leaf plate under the shifter tube lower lever.

Universal joints—

Disassembled and parts lubricated every 15,000 miles. Universal joint body should be packed with 1¼ ounces of a heavy fibre grease made from a high viscosity mineral stock.
(In 1938, universals required lubrication every 30,000 or 40,000 miles.)

Generator—

Lubricate with light engine oil every 6000 miles.
(In 1938, a 2000-mile interval was

Chrysler and DeSoto . . .

Continued

Major Lubrication Changes

specified, although the 6000-mile period was recommended in the spring of 1938.)

Distributor breaker arm pivot—

No lubrication required.
(This change was made in the spring of 1938. Prior to that time, two or three drops of light engine oil were recommended.)

Rear wheel bearings—

Lubricate every 15,000 miles. (Formerly every 12,000 miles.)

Fluid drive transmission—

Standard equipment on Chrysler Custom Imperial only. The oil used in the fluid coupling is a straight mineral oil of high quality, with low volatility, low pour point, and in the 10W viscosity range. The company requests that any servicing of this transmission be done by Chrysler dealers, and the oil is supplied to them in gallon cans through the Chrysler Motor Parts Corp.
The operation of the unit is such that the oil does not need to be changed, according to the Chrysler engineering department. The capacity of the unit filled to the proper level is about 8000 cubic centimeters.

Steering gear

Use low cold test SAE 90 fluid gear lubricant for all-year service and check every 6000 miles.
(In 1938, an SAE 140 or 160 was specified for summer, and an SAE 90 for winter, with checking done seasonally.)

Water pump—

On both the 1939 Chrysler Royal and the DeSoto, a lubricant fitting is provided which takes a water pump lubricant every 2000 miles. On the 1939 Chrysler Imperial, no lubrication is required for the water pump.
(These are similar to 1938 recommendations for these models.)

Capacities

DeSoto—

Cooling system—19 qts. (was 20 qts.)
Fuel tank—18 gal. (was 16 gal.)
Transmission with overdrive—3 pts. (was 3¼ pts.)

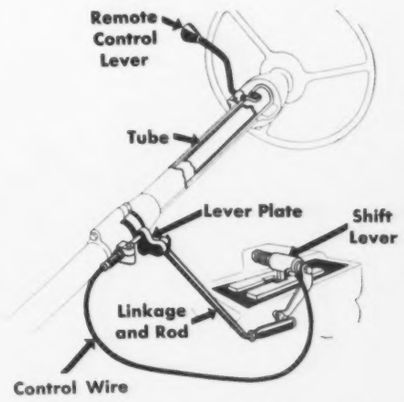
Chrysler Royal—

Cooling system—17 qts. (was 20 qts.)
Fuel tank—18 gal. (was 16 gal.)
Transmission with overdrive—3 pts. (was 3¼ pts.)

Chrysler Imperial—

Cooling system—24 qts. (was 20 qts.)
Fuel tank—21 gal. (was 16 gal.)
Transmission without overdrive—3½ pts. (was 3¼ pts.)

The fuel pump on the DeSoto and Chrysler is of the inverted type. The inverted position places the pump farther from the exhaust manifold, and a metal shield gives added protection from the heat



The operating mechanism of the steering column shift lever, as used on the 1939 DeSoto and Chrysler

Major Engineering Changes

Steering column shift lever—

Standard equipment on all Chrysler and DeSoto models.

Safety-signal speedometer—

Indicator needle contains bright colored light which changes from green to amber at 30 miles per hour. Between 30 and 50 the color remains amber, and above 50 it changes to a bright red.

Automatic overdrive—

(Optional on DeSoto, Chrysler Royal and Chrysler Imperial. Standard on Chrysler Custom Imperial.)
Improvements provide for overdrive cut-in at from 23 to 28 miles per hour instead of above 40 as formerly, and a solenoid device enables the driver to go from overdrive to conventional high merely by pressing the accelerator pedal to the floor.

Engine—

Chrysler Imperial—

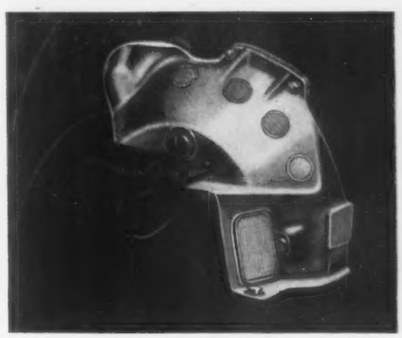
Horsepower increased from 110 to 135 at 3400 r.p.m. Total piston displacement is 323.5 cubic inches, an increase of 24.9 cubic inches over last year. Standard compression ratio is 6.8 to 1. With a special aluminum head will produce a 7.45 to 1 ratio and will add about 8 horsepower. A manual spark control is provided, which allows the driver to adjust spark to meet variables of load, altitude and fuel.

Chrysler Royal—

Horsepower increased from 95 to 100 at 3600 r.p.m. Compression ratio has been raised from 6.2 to 1, to 6.5 to 1.

DeSoto—

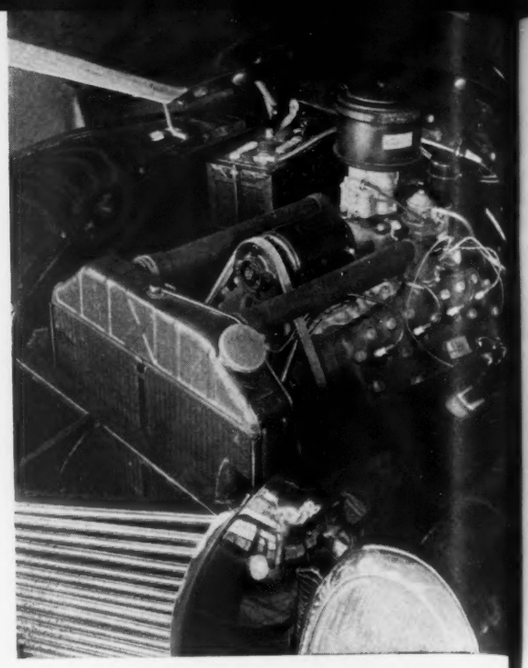
Larger capacity carburetor is provided with a new balancing tube so that the float bowl intake also is now inside the air cleaner. This diminishes the possibility of mixture changing due to changed resistance of air cleaner.



The clutch on the DeSoto and Chrysler is air-cooled by a fan-like pressure plate which circulates air in large volume through the clutch

Ford, Mercury, Lincoln-Zephyr . . .

NOTE—Because of the similarity of their lubrication requirements, these three cars are treated as a group on this page. The Mercury follows Ford recommendations except where noted.



Although all of the 1939 Ford, Mercury and Lincoln-Zephyr models have alligator-type hoods, the design of the DeLuxe Ford and Mercury hoods leave the engine particularly accessible for minor servicing. The Mercury is shown here

Major Lubrication Changes

Transmission—

Ford, Mercury, and Zephyr transmissions require an SAE 90 gear lubricant for winter and an SAE 140 for summer.
(In 1938, Ford and Zephyr transmissions required an SAE 90 or 110 for winter and an SAE 160 for summer.)

Rear Axle—

Ford and Mercury, with spiral bevel axle, require an SAE 90 mild extreme pressure lubricant for winter and an SAE 140 mild e.p. lubricant for summer.
(In 1938, Ford recommended an SAE 90 or 110 for winter and an SAE 160 for summer, all of the mild e.p. type.)
Zephyr, continuing with a hypoid axle, again specifies an SAE 90 hypoid lubricant, and an SAE 80 hypoid for temperatures below —10 degrees.

Rear wheel bearings—

On Ford and Mercury, lubricate every 1000 miles with wheel bearing lubricant through pressure gun fittings.
(In 1938, these points on the Ford took a chassis lubricant.)
On the Zephyr, rear wheel bearings are to be removed and packed with wheel bearing lubricant every 5000 miles.
(In 1938, these points on the Zephyr took a chassis lubricant every 1000 miles through a pressure gun.)

Propeller shaft—

On the Ford, Mercury and Zephyr, a fitting is provided at the center of the propeller shaft, taking a chassis lubricant every 1000 miles.
(In 1938, this point did not appear on the Zephyr.)

Capacities—

Zephyr—

Transmission—3½ pts. (Was 2½ pts.)

Mercury—

Crankcase, 5 qts; transmission, 2½ pts.; rear axle, 2½ pts.; cooling system, 22 qts.; fuel tank, 17 gals.

Major Engineering Changes

Mercury 8—

Powered by 95 horsepower V-8 engine, which resembles the 60 and 85 engines in the 1939 Ford line. Mercury piston displacement is 239 cubic inches and compression ratio is 6.15 to 1.

Hydraulic brakes—

Ford, Mercury and Zephyr models are equipped with hydraulic brakes. Double-piston pressure-cylinders are used and diameters are so proportioned that approximately 55 per cent front wheel braking is obtained.

Rear axle—

On the Mercury, the normal gear ratio is 3.54 to 1, with several optional ratios available.

Fan—

Located on the crankshaft of the DeLuxe Ford 85, Mercury, and Zephyr engines.

Hood—

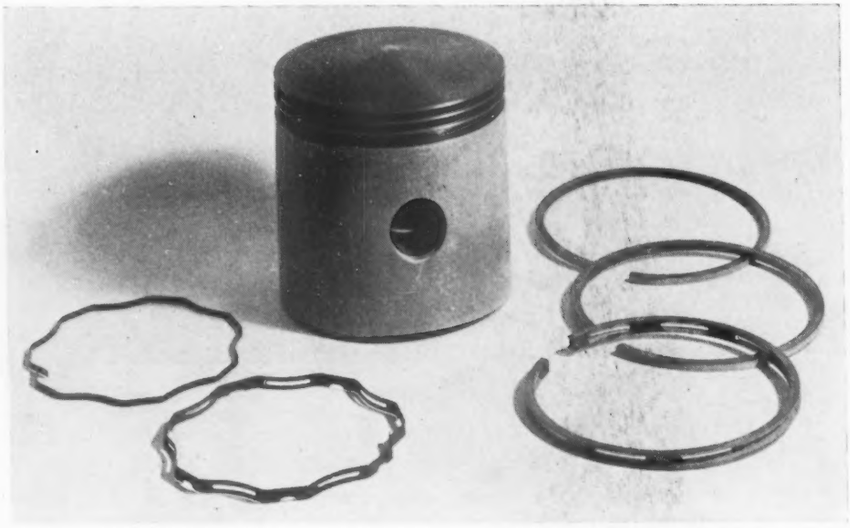
On the standard Ford and Zephyr, the dummy radiator ornament is turned to unlock the alligator type hood.
The hoods of the DeLuxe Ford and Mercury, also of the alligator type, are unlocked by a combined hood latch and handle which is concealed in the vertical extension of the radiator ornament at a point where the top section of the grille meets the hood.

Engine—

In the Ford 85 and Mercury engines, valve seat inserts of tungsten-chromium steel are used under both intake and exhaust valves. New type piston rings, thinner and with steel inner expander springs, are said to reduce oil consumption.

Battery—

Mercury battery, following Ford and Zephyr, is located under the hood on the right side.



New type piston rings in the Ford 85 and Mercury engines are said to improve oil economy. The center compression ring and lower oil control ring are thinner and are fitted with steel inner expander springs

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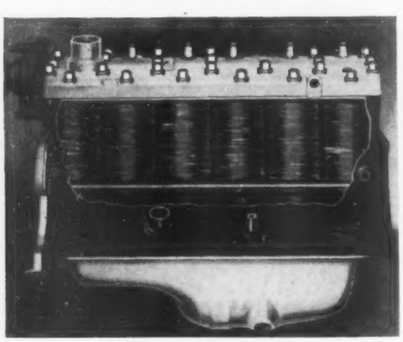
COMPUTAPEX A-38

Graham . . .

NOTE—Lubrication Requirements of the 1939 Grahams are exactly the same in every respect as the 1938 models.

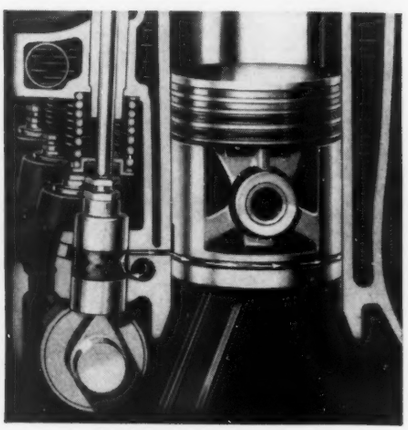
Major Lubrication Changes



Water circulates entirely around the full length of each cylinder in the 1939 Graham engine block to more efficiently cool the motor and to help prevent cylinder warping

Capacities—

Cooling system — supercharger models, 16½ quarts. (Was 15.) On 1939 models not supercharged, 15 quarts.



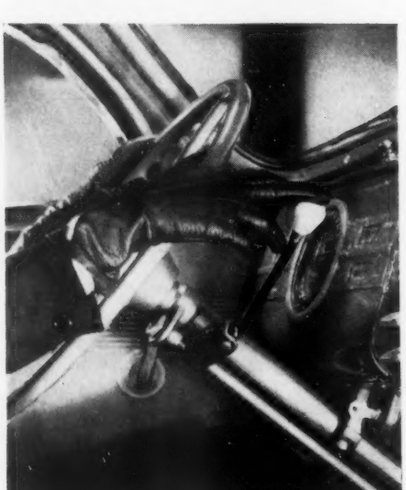
Instantaneous cylinder wall lubrication is a Graham feature continued from last year. The arrows indicate the path of the oil around the lower rim of the piston

Major Engineering Changes

Supercharger Models

Dual exhaust manifolds
Larger exhaust valves
Larger carburetor
Dual mufflers
Larger radiator core
Kick shackle added to cam and lever steering system
Steering column shift lever (optional)
Vacuumatic gear shift discontinued

The six-cylinder Graham engine with supercharger. It develops 116-horsepower at 4000 r.p.m. Without the supercharger it develops 90-horsepower at 3600 r.p.m.



The widely used steering column shift lever is offered as optional equipment on the 1939 Grahams

Hudson . . .

NOTE—The Terraplane name has been eliminated for 1939.

Major Lubrication Changes

Rear axle—
Use SAE 90 e.p. gear lubricant for sumemr and winter.
(In 1938, SAE 110 e.p. was recommended.)

Steering gear—
Use SAE 90 e.p. gear lubricant for summer and winter.
(In 1938, SAE 110 e.p. was recommended.)

Automatic clutch control cylinder—
Service every 10,000 miles with Hudson shock absorber fluid—1 oz.
(In 1938, this point required service every 15,000 miles.)

Electric hand—
Service every 10,000 miles with Hudson shock absorber fluid — 1 oz.
(In 1938, this point required service every 15,000 miles.)

Engine oil—
Min. temp. 70 deg.—SAE 30.
Min. temp. 32 deg.—SAE 20.
Min. temp. 10 deg.—20W.

The latch for the Hudson hood is located inside the car, under the instrument panel at the left

FAST STARTING

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Sinclair H-C gasoline is stepped up to contain 30% more quick-vaporizing fractions for faster winter starting.

Balancing this Winter H-C are free flowing Sinclair Opaline and Sinclair Pennsylvania Motor Oils . . . free flowing and an aid to fast starting in zero temperatures because they are dewaxed and dejellied by an extra refining process.

This balancing to meet requirements is typical of Sinclair petroleum products for all uses.

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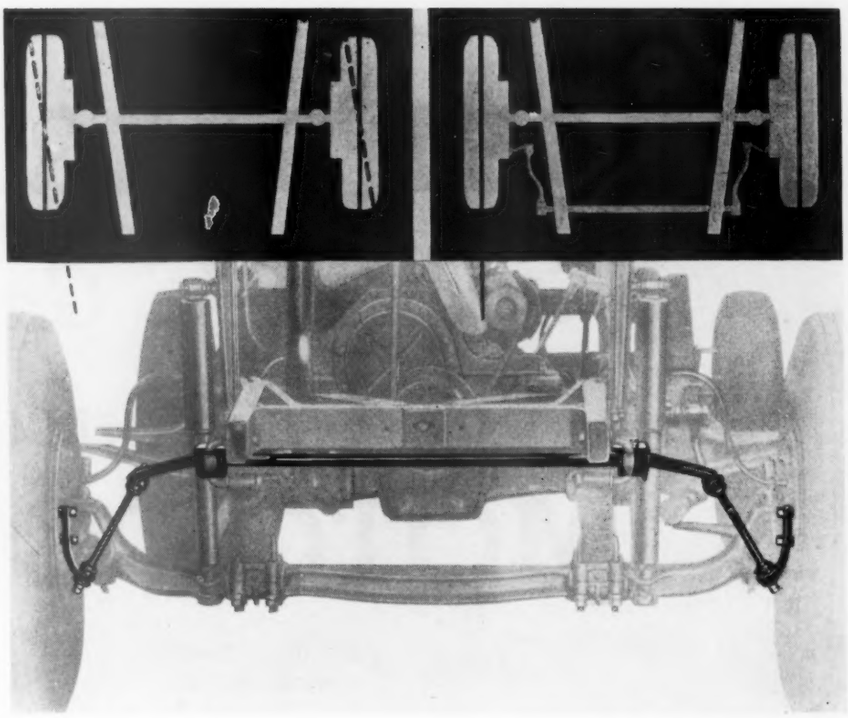
For full details phone the nearest Sinclair office, or write Sinclair Refining Company (Inc.), 630 Fifth Avenue, New York, N. Y.

SINCLAIR

Hudson's new Auto-Poise control holds the front wheels in true direction regardless of high winds or rough roads. The bar ends are connected by links to the wheel spindles so that the bar is twisted like a spring when either wheel is bounced out of line, and tends to pull it back to center again



•

Min. temp. —10 deg.—10W.
Min. temp. —30 deg.—10W plus 10% kerosine.
(For 1938)
Min. temp. 50 deg.—SAE 30.
Min. temp. 10 deg.—20W.
Min. temp. —10 deg.—10W.
Min. temp. —30 deg.—10W plus 10% kerosine.

Capacities—

Transmission (all models)—2¼ lbs. (formerly 3 lbs.)
Crankcase (6 cyl. models)—4½ qts.* (formerly 5 qts.)
*Some 1938 models also have this crankcase capacity.

Major Engineering Changes

Front sway-bar—

"Reverse alligator" type hood . . .

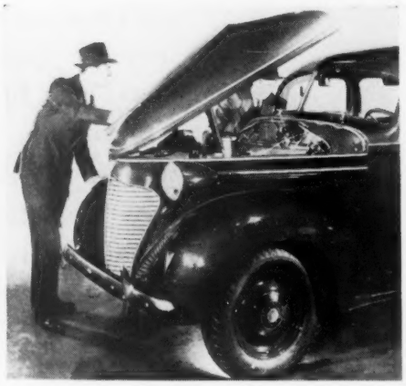
Hinged at the front, now on all Hudson models. (Used on Hudson 112 in 1938.) Hood latch is controlled from a lever mounted inside car under left side of instrument panel.

On Hudson 112 . . .

Horsepower has been increased from 83 to 86. Improved carburetor and larger diameter carburetor throat are largely responsible for this boost.

On Hudson Sixes . . .

Oil circulation is improved by a direct flow from oil pump to the troughs from which Nos. 1 and 6 main bearings are fed. Vacuum-operated metering pins have been adopted for the dual carburetors.



The "reverse alligator" type hood, introduced on the Hudson 112 last year, is now used on all 1939 Hudson models. The hood latch is located inside the car

Hupp . . .

NOTE—The 1939 Hupmobile Senior Six and Eight have similar lubrication requirements to the 1938 line. The Hupp Skylark, with a body made with the dies of the late Cord, is a Six. The Skylark is not yet in production.

Major Lubrication Changes

Hupp Skylark—

Weighs only 2900 pounds, and is powered by a 101-horsepower engine. Has a low center of gravity, with front floor being 11½ inches from the road and the rear floor 10½ inches. The muffler is located transversely ahead of the gasoline tank.

Steering column shift lever—

Optional on all models.

Hupp Four—

A 4-cylinder sedan is to be announced soon, according to company reports.

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Nash . . .

Major Lubrication Changes

Crankcase—

Change oil every 2000 miles. (Was 1000 to 1500 miles.)

Oil filter—

On cars so equipped, renew filter cartridge every 10,000 to 12,000 miles.

Transmission—

Transmission, either with or without overdrive, is to be drained, flushed and refilled twice a year or every 10,000 miles.
(In 1938, this was recommended every 5000 miles.)

Rear axle—

Hypoid axles on sedans only. Hypoid lubricants, SAE 90, are recommended for all 1939 Nash axles. Draining, flushing and refilling are recommended for every 10,000 miles.
The car owner is cautioned against using a hypoid lubricant in the transmission.
(In 1938, an SAE 90 e.p. lubricant was recommended for the rear axle, with draining and refilling every 5000 miles.)

Vibration dampener—

Remove two brass filler plugs on outside diameter of flywheel and fill with light engine oil every 3000 miles.

Water pump—

Lubricate with water pump lubricant every 3000 miles. (Was 2000 miles.)

Capacities—

Rear axle—

Nash Ambassador Eight—3½ pts. (Was 6 pts.)
Nash Ambassador Six—3½ pts. (Was 4 pts.)
Nash LaFayette Six—3½ pts. (Was 4 pts.)

Major Engineering Changes

Vacuumatic gear shift—

Discontinued on all models.

Steering column shift lever—

Optional equipment on all models.

Hypoid rear axles—

Provided on all sedan models only.

Automatic overdrive—

Standard equipment on Ambassador Eight, and optional on other models. (Formerly optional on all models.)

Engine—

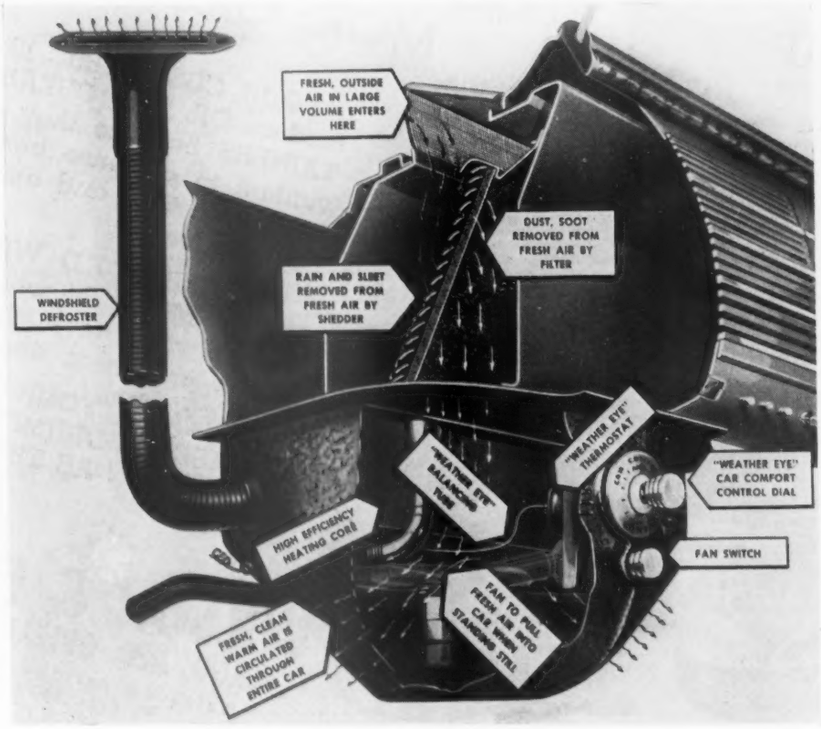
Nash LaFayette Six is 99 horsepower, (was 95 hp.)
Dual jet carburetion is used, and compression ratio is 6.3 to 1.

Hood—

Alligator type, counter-balanced, with an automatic catch at the top of the radiator grille which prevents the hood from being forced open by the wind if not properly locked. The lock handle is located near the base of the radiator grille.

"Weather eye"—

Standard equipment on Nash Ambassador Eight, and optional on other models. System automatically maintains any desired temperature inside car. Air is drawn in from outside, as much as 800 cubic feet per minute, filters and heats it in winter.


FRESH, OUTSIDE AIR IN LARGE VOLUME ENTERS HERE
DUST, SOOT REMOVED FROM FRESH AIR BY FILTER
RAIN AND SLEET REMOVED FROM FRESH AIR BY SHEDDER
WINDSHIELD DEFROSTER
"WEATHER EYE" THERMOSTAT
"WEATHER EYE" CAR COMFORT CONTROL DIAL
"WEATHER EYE" BALANCING TUBE
HIGH EFFICIENCY HEATING CORE
FAN SWITCH
FAN TO PULL FRESH AIR INTO CAR WHEN STANDING STILL
FRESH, CLEAN WARM AIR IS CIRCULATED THROUGH ENTIRE CAR

Cut-away view of the 1939 Nash "Weather Eye." The fresh air is breathed in at the top through the car's cowl ventilator. This section is a cut-away through the instrument panel

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A BETTER TRUCK FOR HAULERS...Priced with the Lowest

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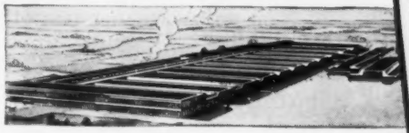

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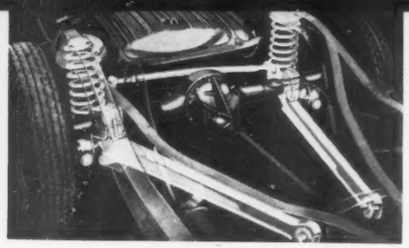
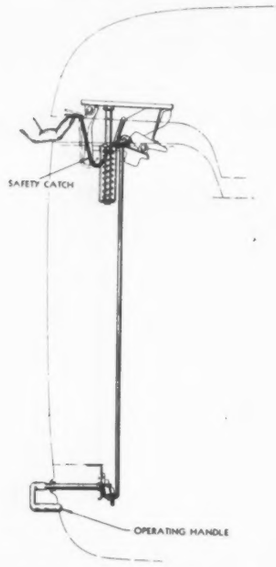
See For Yourself **TAKE A TEST** *See Your Dodge Dealer*

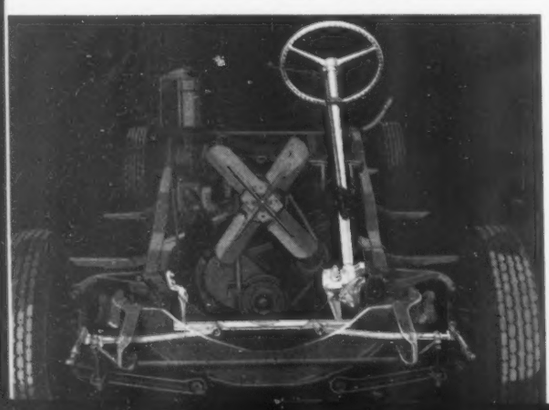


Coiled rear springs on the 1939 Oldsmobile eliminate six shackle lubrication points. The new Oldsmobile hypoid rear axle is also shown, which requires an SAE 90 hypoid gear lubricant (SAE 80 hypoid lubricant for temperatures below —10 degrees), which is the same recommendation which was made for Oldsmobile's spiral bevel rear axle in 1938



Oldsmobile's alligator-type hood is equipped with hood latch handle located behind the front bumper bar. Turning the handle unlatches the hood and a spring forces the hood upward about 2 inches. Then by inserting a finger under the front of the hood, a safety latch can be released and the hood raised

Oldsmobile's steering column shift lever, showing the mechanical hook-up of the linkage. This is standard equipment on all 1939 Oldsmobiles



In the new Oldsmobile steering mechanism, the intermediate steering arm has been eliminated, and an idler arm, located at the right end of the center relay link has been incorporated into the design. Tie rods are of equal length

Oldsmobile . . .

Major Lubrication Changes

Hypoid rear axle—

Hypoid type axle is new to Oldsmobile for 1939, but lubrication recommendation remains same as last year, SAE 90 hypoid gear lubricant, with a drain and refill every 10,000 miles or twice a year. For temperatures below —10 deg., use SAE 80 hypoid gear lubricant.

Coiled rear springs—

Eliminate all shackle lubrication points.

(In 1938, there were 6 rear shackle and spring bolt points to be lubricated.)

Universal slip joint—

On cars equipped with standard transmission, slip joint is located at forward end of propeller shaft and is lubricated automatically through the transmission. On cars with automatic transmission, slip joint is located at differential end of shaft and has a fitting for a chassis lubricant every 1000 miles.

Clutch auxiliary shaft—

Not provided. (In 1938, this point required a chassis lubricant every 1000 miles.)

Starting motor—

Engine oil at front end every 1000 miles.

(In 1938, this unit required lubrication at both ends.)

Steering gear—

Steering gear lubricant. (In 1938, used chassis lubricant.)

Steering idler arm takes a chassis lubricant every 1000 miles.

(No steering idler arm provided on 1938 models.)

Intermediate steering arm eliminated. (In 1938, this point required a chassis lubricant every 1000 miles.)

Inner tie rod end fittings re-located.

Standard transmission—

Use SAE 80 gear lubricant for all year service.

(In 1938, SAE 160 was recommended for summer, and SAE 80 for winter.)

Automatic transmission—

For summer, use SAE 30 engine oil.

For winter, below 45 deg., use 20W.

For winter, below zero deg., use 10W.

In 1938, winter recommendations were as follows:

Min. anticipated temp. not lower than 32 deg., use SAE 20 or 20W.

Min. anticipated temp. as low as 10 deg., use 20W.

Min. anticipated temp. as low as —10 deg., use 10W.

Min. anticipated temp. below —10 deg., use 10W plus 10% kerosine.

It is recommended that the automatic transmission be flushed out at the end of the first 5000 miles and every 10,000 miles thereafter. Flushing oil should be used, which will remove any contaminated oil and prevent the formation of shellac around the moving parts.

Engine oil—

For summer, an SAE 20 or 20W is recommended, or an SAE 30 when temperatures above 90 deg. are encountered.

(In 1938, summer engine oil recommendation was SAE 30.)

Capacities—

Crankcase—

on six-cyl. models, 5 qts. (Was 6 qts.)

on eight-cyl. models, 6 qts. (Was 7 qts.)

Cooling system—

on eight-cyl. models, 24 qts. (Was 21 qts.)

Major Engineering Changes

New six-cylinder model has 90 horsepower engine.

Coiled rear springs—

Used in combination with four separate stabilizing factors built into the chassis.

•

Dual center-control steering—

Employs a relay link in connection with twin tie rods of equal length.

Steering column shift lever standard equipment.

Hypoid rear axle—

Eliminates the split propeller shaft used on 1938 models, and has permitted the floors of the large Six and the Eight to be lowered nearly three inches.

Alligator-type hood—

The hood latch handle is located directly behind the front bumper bar.

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Packard . . .

NOTE—All general chassis points are now to be lubricated every 2000 miles, instead of every 5000, as formerly. This includes lubrication of the starter, generator, distributor, water pump (if lubrication is required), and universal joint spline. This recommendation is made retroactive to include all 1938 Packard models.

Major Lubrication Changes

Transmission overdrive—

Overdrive is equipped with its own drain and overflow plugs and should be checked independently of transmission. When filling the overdrive, it is recommended the transmission filler plug be removed to avoid overfilling the transmission. An SAE 140 or 160 gear lubricant for summer, and an SAE 90 for winter, are recommended for both the transmission and overdrive. The lubricant should be changed every 10,000 miles or at the beginning of each summer and winter season. Since Dec. 1, units have been shipped with a metal tag on the filler plug reading "Use only Packard approved hypoid oil." As further identification, the letter "H" is stamped on the bottom of the unit. In these units, only SAE 90 hypoid lubricant should be used.

The Packard steering wheel shift lever, standard equipment on all models, is power actuated on the Twelve and manually operated on the other models

Steering mechanism—

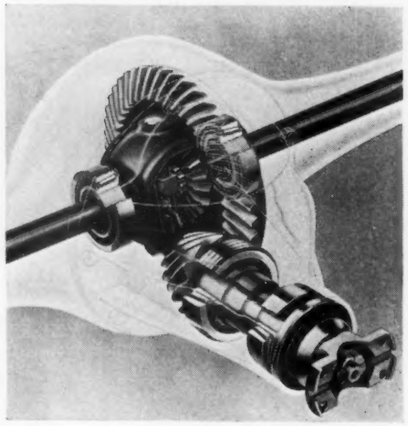
Steering crank, located at the extreme front and center of the steering mechanism of all models except the Twelve, has a point which takes a chassis lubricant every 2000 miles.
(In 1938, the Packards were not equipped with a steering crank.)

Water pump—

Permanently lubricated on all models except the Twelve.
(In 1938, the water pump had an oiler which took an SAE 30 or 20W oil.)

Engine oil—

Change engine oil every 2000 miles.
(In 1938, a change every 2000 to 3000 miles was recommended.)



For its hypoid axles, Packard continues to recommend hypoid lubricants from its factory-approved list

Capacities—

Crankcase
Packard Six—5 qts. (was 6 qts.)
Super Eight—7½ qts. (was 8 qts.)

Transmission
Super Eight — 2 pts. (was 4½ pts.)

Overdrive
All models where available —1¼ pts.

Cooling system
Super Eight—22 qts. (was 20 qts.)

Fuel tank
Super Eight—21 gals. (was 24 gals.)

Major Engineering Changes

Transmission—

Overdrive available at extra cost on all models except the Twelve. Provided with larger gears and additional anti-friction bearings. (On Six and 120.)

Gear shift lever—

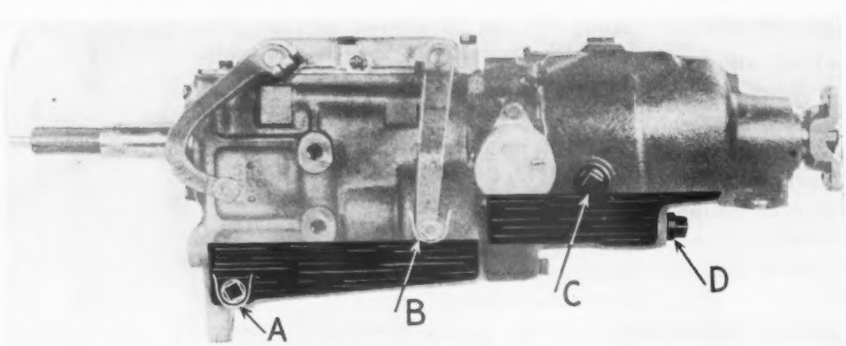
Mounted on steering column. All are manually-operated, with the exception of the Twelve, which is power-actuated.

Water pump—

Pump is of the packless type (except Twelve), and employs a spring loaded sleeve type rubber seal and a composition thrust washer.

Shock absorber—

A fifth shock absorber, to suppress sidewise or transverse road shocks. (Not on Twelve.)



The overdrive, new to Packard for 1939, is available at extra cost on all models except the Twelve. The overdrive is equipped with its own filler plug "C" and drain plug "D", and should be filled and checked independently of the transmission. A newly developed control feature on the overdrive permits changing instantly to third speed for quick acceleration by simply depressing the accelerator pedal

Plymouth and Dodge . . .

NOTE—As in 1938, the lubrication requirements of the 1939 Plymouth and Dodge are identical.

Major Lubrication Changes

Independent front wheel suspension—

Adoption of coil springs eliminates 6 shackle lubrication points, and replaces them with 14 points requiring chassis lubricant every 1000 miles. These points are found on upper and lower spindle bushings, lower control arm bushings, and upper control arm pivots.

Hypoid rear axle—

Drain, flush and refill every 15,000 miles. (Formerly 10,000 miles.)

Steering column shift lever—

Rub a thin film of short fibre wheel bearing grease (medium) onto the gear shifting lever fulcrum slide at the steering wheel, and water pump grease onto the clover leaf plate under the shifter tube lower lever.

Universal joints—

Disassembled and parts lubricated every 15,000 miles. Universal joint body should be packed with 1¼ ounces of a heavy fibre grease made from a high viscosity mineral stock.
(In 1938, universals required lubrication every 30,000 or 40,000 miles.)

Generator—

Lubricate with light engine oil every 6000 miles.
(In 1938, a 2000-mile interval was specified, although the 6000-mile period was recommended in the spring of 1938.)

Distributor breaker arm pivot—

No lubrication required.
(This change was made in the spring of 1938. Prior to that time two or three drops of light engine oil were recommended.)

Rear wheel bearings—

Lubricate every 15,000 miles. (Formerly every 12,000 miles.)

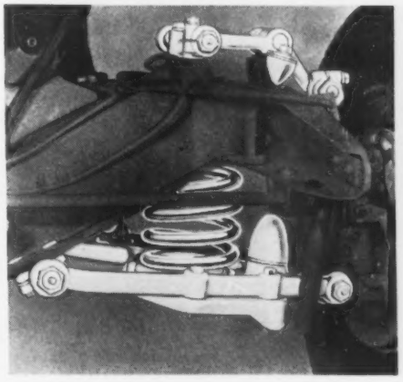
Steering gear—

Use low cold test SAE 90 fluid gear lubricant for all year service, and check every 6000 miles.
(In 1938, an SAE 140 or 160 was specified for summer, and an SAE 90 for winter, with checking to be done seasonally.)

Capacities—

Fuel tank—18 gals. (Was 16 gals.)

The steering column shift lever is standard equipment on Dodge and on the Deluxe model of the Plymouth. It is not available on the standard Plymouth. The lever is manually operated, being connected to the transmission by linkage



The former front leaf springs have been replaced on Plymouth and Dodge by coil springs in conjunction with independent front wheel suspension. The six shackle lubrication points which have been eliminated have been replaced by 14 lubrication points in the new front suspension system

Major Engineering Changes

Steering column shift lever—

Standard equipment on all Plymouth and Dodge models except standard Plymouth where it is not available.

Independent front wheel suspension—

Replace the former leaf springs.

Safey-signal speedometer—

Indicator needle contains bright colored light which changes from green to amber at 30 miles per hour. Between 30 and 50 the color remains amber, and above 50 it changes to a bright red.

Steering mechanism—

Drag link eliminated, and tie rod split in center. Ratio increased to 18.2 to 1.

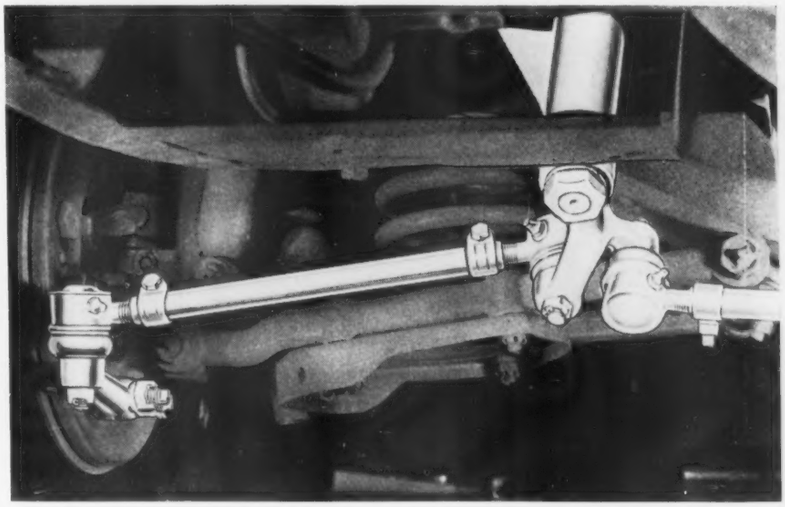
Engine—

Compression piston rings have a thin surface coating which contain a lubricant as a part of their chemical substance. Unit pressure on cylinder walls has been reduced by increasing by 25 per cent the effective bearing surface of the top ring.

Larger capacity carburetor is provided with a new balancing tube so that the float bowl intake also is now inside the air cleaner. This diminishes possibility of mixture changing due to changed resistance of air cleaner.
An inverted fuel pump with greater capacity permits fuel temperatures to run hotter without danger of vapor lock.

Clutch—

"Over-center" spring and variable ratio pedal results in less pressure the farther the pedal is depressed. Clutch ventilation is improved by an increased area of outlet holes.



The drag link has been eliminated on the new Plymouth and Dodge steering linkage. The tie rod is split and connects directly with the pitman arm. The steering gear ratio has been increased to 18.2 to 1

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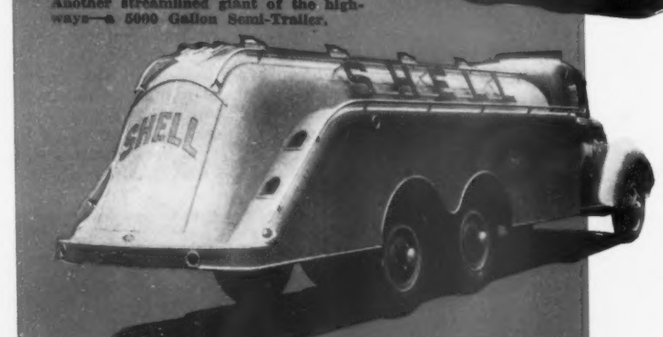

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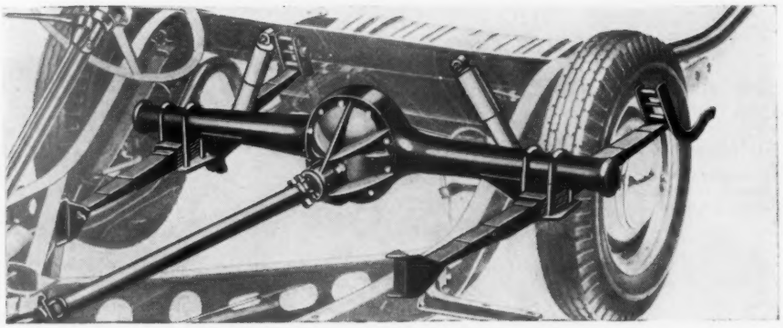


Pontiac's new hypoid axle, shown in this rear view of the 1939 Pontiac chassis, takes an SAE 90 hypoid lubricant all year 'round, with draining and flushing being recommended every 10,000 miles or twice yearly

Major Lubrication Changes

Hypoid Rear Axle (was Spiral bevel)

Lubricate with SAE 90 hypoid lubricant. Drain and refill every 10,000 miles or twice yearly.
(In 1938 Pontiac, an SAE 160 or 140 gear lubricant was recommended for summer and an SAE 90 for winter, with draining and refilling to be done twice yearly.)

Transmission

Lubricate with SAE 140 gear lubricant for summer, and SAE 90 for winter.
(In 1938 Pontiac, an SAE 140 or 160 was recommended for summer.)

Rear springs—front ends

Chassis lubricant every 1000 miles.
(In 1938, front ends of rear springs required no lubrication.)

Steering relay rod

Chassis lubricant at each end every 1000 miles.
(In 1938, the Pontiac was not equipped with a steering relay rod.)

Steering idler arm

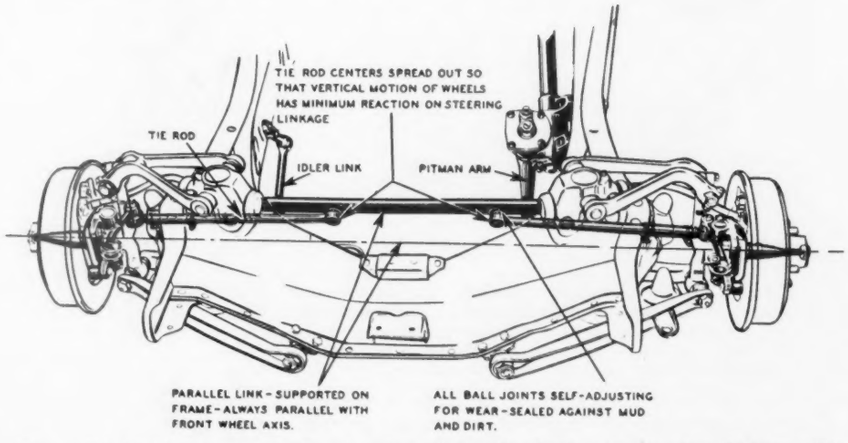
Located at right end of relay rod, and requires a chassis lubricant every 1000 miles.
(In 1938, the Pontiac was not equipped with a steering idler arm.)

Steering drag link

Not equipped with steering drag link.
(In 1938, the steering drag link required lubrication at each end with chassis lubricant every 1000 miles.)

Capacities

Fuel tank—16 gallons (formerly 18 gallons).


TIE ROD CENTERS SPREAD OUT SO THAT VERTICAL MOTION OF WHEELS HAS MINIMUM REACTION ON STEERING LINKAGE
TIE ROD
IDLER LINK
PITMAN ARM
PARALLEL LINK - SUPPORTED ON FRAME - ALWAYS PARALLEL WITH FRONT WHEEL AXIS.
ALL BALL JOINTS SELF-ADJUSTING FOR WEAR - SEALED AGAINST MUD AND DIRT.

The solid black portion of the drawing shows Pontiac's new steering linkage. The center relay link eliminates the drag link, and an idler link has been added

Lifting the dummy radiator ornament raises the alligator hood on the 1939 Pontiac. The ornament serves as a lock and a handle

Major Engineering Changes

Hypoid rear axle

Gear shift lever

Remote control, located on steering column. Standard equipment on all 1939 models. Was optional equipment last year.

Hood

Alligator type, lifting from the front by the radiator ornament which serves as a locking handle.

Knee action

Units have been refined by the use of lighter and stronger pressed steel arms.

Steering mechanism

New parallel link design of connecting tie rods. Horizontal link connects steering gear pitman arm on left side of frame with idler arm on right side.

Rear springs

Conventional leaf spring with helper spring directly below it. For lighter loads, car rides entirely on main or upper unit. As load increases, upper spring comes more and more into contact with helper spring.

Clutch

Single plate type, equipped with new spring element. A shallow, cone-shaped, spring-steel disc or diaphragm with its center removed and slotted radially forms 18 integral clutch release fingers. This spring disc replaces 21 parts in the former clutch.

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Major Lubrication Changes

Engine oil—

For summer, when the average daytime temp. is 90 deg., use SAE 30. In spring and fall, when the lowest anticipated temp. is 32 deg., use SAE 30; and when lowest anticipated temp. is 10 deg., use SAE 20. In winter, when the lowest anticipated temp. is below 10 deg., use SAE 10.

On the 1938 Studebaker, engine oil recommendations were as follows:

Above 90 deg., use SAE 40.

Between 90 and 45 deg., use SAE 30.

Between 45 and zero deg., use SAE 20.

Zero deg. or below, use SAE 10.

Rear Axle—

Drain and refill with SAE 90 hypoid lubricant every 10,000 miles, and check level every 5000 miles. (This has been made retroactive to cover all Studebaker hypoid axles.)

(In 1938, draining and refilling were recommended for every 5000 miles.)

Transmission

Drain and refill every 10,000 miles, and check level every 5000 miles. (This has been made retroactive to cover all Studebaker models for all years.)

(In 1938, draining and refilling were recommended for every 5000 miles.)

Universal joints—

Repack with chassis lubricant every 10,000 miles.

(In 1938, the universal joints on the six-cylinder models were rubber insulated and required no lubrication.)

Steering mechanism—

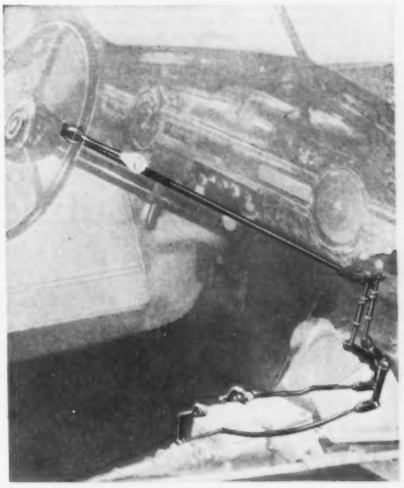
Tie rod ends require chassis lubricant every 1000 miles. (The change from rubber mounted bushings at outer tie rod ends was made early in 1938.)

Capacities—

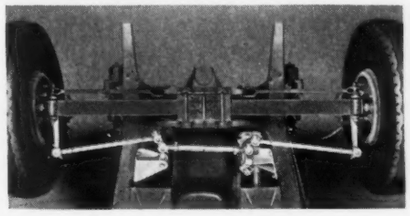
Crankcase — 6 qts. on six-cyl. model. (Was 5½ qts.)

Cooling system—14½ qts. on six-cyl. model. (Was 14 qts.)

Major Engineering Changes—HS



The Studebaker steering column shift lever, standard equipment on all 1939 models, works manually and mechanically through a system of linkage to the transmission case



The outer ends of the Studebaker tie rods require a chassis lubricant every 1000 miles. The change from rubber mounted bushings at these points was made early in 1938. In this steering mechanism, the two drag links are of equal length, and are connected by a centrally located center link

Major Engineering Changes

Gear shift—

Vacuumatic gear shift discontinued. Steering column shift lever standard equipment.

Transmission—

Overdrive has solenoid control which eliminates the necessity of slowing down below overdrive cut-in period when it is desired to get into conventional gear.

Ventilation—

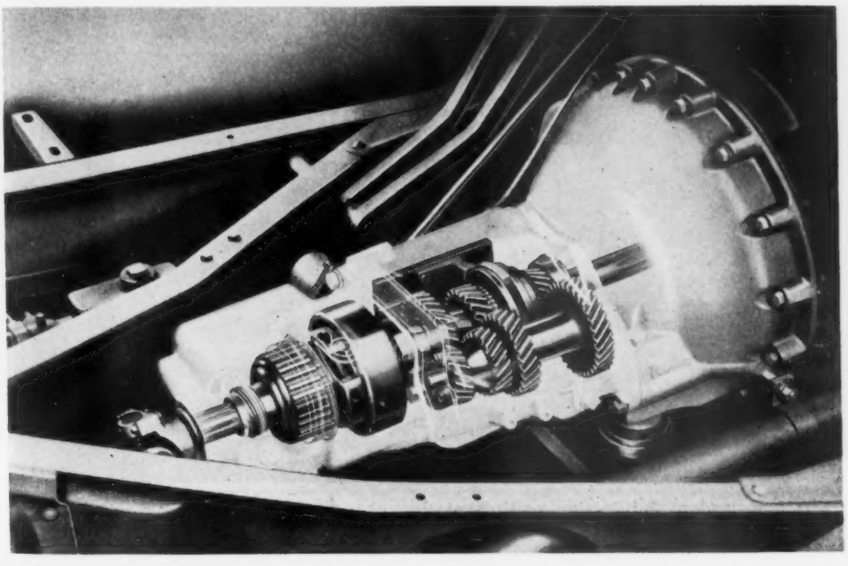
The ventilating, filtering and heating unit optional on all models.

Universal joints—

Needle bearing type on all models. (Formerly rubber insulated type on six-cylinder models).

Battery—

Located under hood on left side.



Phantom view of the new Studebaker overdrive transmission. Equipped with a solenoid control, it is not necessary to slow down below the overdrive cut-in speed when desiring to get into conventional gear. It also makes high speed acceleration available when the driver needs it

Willys and Overland . . .

NOTE—The lubrication requirements of the 1939 Willys are the same in every respect as the 1938 model. The Overland is new for 1939. The following comparison shows the points where the lubrication of the 1939 Overland differs from the 1939 Willys:

Major Lubrication Changes

Distributor—

Overland—

Lubricate distributor every 1000 miles by placing 3 to 6 drops of engine oil in the oiler. Breaker cam lubricated as on 1938 Willys.

Willys—

Lubricate distributor every 1000 miles by turning grease cup down one-half turn, using short fibre grease. Breaker cam lubricated as on 1938 Willys.

Universal joints—

Overland—

Check universal joint boots every 1000 miles. Repack joints every 20,000 miles using universal joint grease.

Willys—

Check universals every 1000 miles, and if necessary lubricate with universal joint grease. (Those joints without plugs are pre-lubricated and require no further attention.)

Fan and water pump—

Overland—

Bearing is pre-lubricated and requires no further attention.

Willys—

Lubricate fan and water pump bearings every 500 miles by turning grease cup one turn and putting 7 or 8 drops of engine oil in oiler on front bearings. Fill grease cup with water-proof grease every 1000 miles.

Major Engineering Changes

Engine (Overland)—

Has a 134.2-cubic inch engine (same as Willys), but develops 61 horsepower at 3600 r.p.m., as compared with 48 hp. at 3200 for the Willys. Has 6.35 to 1 compression ratio, a new camshaft which opens valves earlier and closes them later, and an improved fixed jet downdraft carburetor.

Brakes (Overland)—

Hydraulic

Shackles (Overland)—

Rubber

Hood (Overland)—

Similar to current and 1938 Willys models. Alligator type, locked by a latch located at base of radiator grille section. Top, sides and front of hood open as one piece, leaving engine easily accessible.

An immaculate, five-stall lubritorium, with four lifts and modern lubrication equipment throughout is a part of the service station Standard Oil Co. has built at Shaker Square, in an exclusive apartment building and residential section of Cleveland. The design of the building is in style with the architecture of business houses in this section

NAPHTHAS · FUEL OILS · DIESEL FUELS
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MID-CONTINENT
EAST CHICAGO, IND.; WOOD RIVER, ILL.

Transmission, Rear Axle Trends; More Cars Using Hypoids

Highlights in rear axle and transmission trends on the 1939 cars are:

(1) A new and improved transmission overdrive.

(2) The introduction, on an American passenger car, of a fluid drive power transmitter.

(3) The continued increase in the number of hypoid-equipped cars.

(4) The impending struggle for supremacy between the corrosive and non-corrosive types of hypoid lubricants.

(5) The leniency shown by some car manufacturers in their 1939 transmissioin lubricant recommendations.

THE hypoid rear axle, in spite of the fact that it has been in use by Packard for over 15 years, caused many knees to knock when it was first placed on low-priced high-production cars two years ago. At that time, oil companies tore their shirts to develop the type of lubricant demanded by the car manufacturer for these axles and to have that lubricant placed on the car maker's "approved list".

The lubricant manufacturers responded admirably, and soon the "approved list," with over 300 brands entered, disappeared and in its place began to creep in the recommendation to use "an SAE 90 hypoid lubricant manufactured by a reputable oil company", and for 1939, to use "an SAE 90 hypoid lubricant".

Likewise, greater leniency has been shown in regard to the mileage interval for draining, flushing and refilling hypoid axles. This has been notably true in the case of the Chrysler-built cars—Chrysler, DeSoto, Dodge and Plymouth. In 1937, the hypoid rear axles on these cars were to be drained every 6000 miles. In 1938, this interval was increased to 10,000 miles, and for 1939 it has been boosted to 15,000 miles.

New 1939 additions to the hypoid family are Nash (sedan models only), Oldsmobile and Pontiac. Nash recommends an SA90 to hypoid lubricant for all of its 1939 axles, with draining and refilling to be done every 10,000 miles. Formerly an SAE 90 extreme pressure lubricant was recommended for the rear axle with draining every 5000 miles.

Oldsmobile, with its newly adopted hypoid axle, recommends an SAE 90 hypoid gear lubricant with draining every 10,000 miles or twice a year. Oldsmobile recommended this same lubricant in 1938 for its spiral bevel axle. The 1939 Pontiac hypoid recommendation is similar to that of Oldsmobile.

One lubrication engineer, returning from an extended trip through the middle west found the demand for hypoid lubricants easing off and requests for mild extreme pressure lubricants increasing. He pointed out that a survey made by a large oil company revealed that its dealers are selling nine gallons of mild e.p. lubricants to one gallon of hypoid lubricant.

It is reported that dealers, anxious to keep their stock as simple as possible, are eliminating hypoid lubricants, and using a mild e.p. lubricant for hypoid and spiral bevel axles, transmissions, and steering gears.

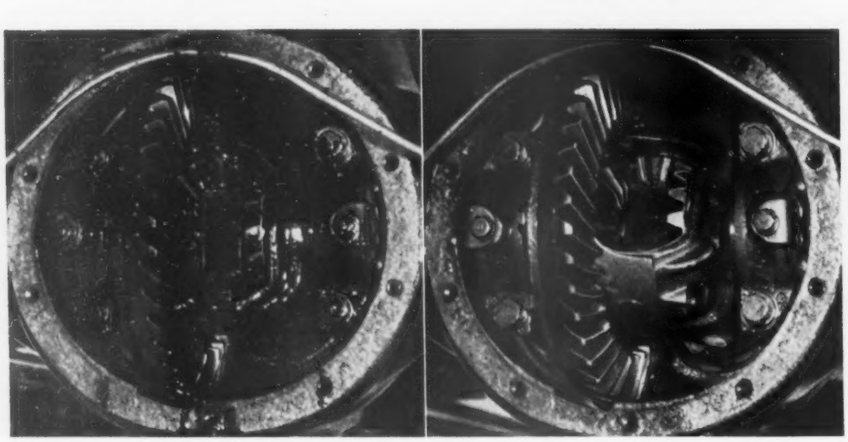
There is increasing talk of a trend toward the use of mild e.p. lubricants in hypoid axles. But on the other hand, there is also a trend, according to some engineers, toward smaller and lighter weight hypoid axles. Smaller axles mean smaller gears, and smaller gears mean greater unit tooth pressures, which will again require more powerful lubricants.

Thus, our two possible trends—less powerful rear axle lubricants and smaller rear axles—do not speak the same language, and there are those along the line who believe that one will eventually have to give way to the other.

Some well known manufacturers of hypoid-equipped cars are weighing carefully the relative advantages of the corrosive and the non-corrosive types of extreme pressure lubricants for hypoid rear axles.

Exhaustive tests have been made on the non-corrosive chlorinated type of extreme pressure lubricant, using a fleet of taxicabs, and results are said to have convinced one car manufacturer that this type of lubricant is highly satisfactory for the factory fill. Some of these lubricants in tests have run over 40,000 miles without draining, and one engineer in the automotive field who has tested many types

Before Flushing **After Flushing**



Flushing is still an important part of hypoid axle lubrication, to remove the heavy film of oil that still clings to the gears and bearings after the axle has drained. These two photos show a hypoid axle before and after flushing

FROM ALL OVER THE WORLD

Come letters like this

Mr. John W. S_____,
American Flange & Manufacturing Co. Inc.,
30 Rockefeller Plaza,
New York, N. Y.
Dear Mr. S_____:
As you know, our Terminal at _____ was pretty well under water during the recent floods, and I am sure that you will be interested to know our experience there with Tri-Sure seals.
I have a letter from Mr. _____, Superintendent of the _____ Terminal, stating that none of our products which were in drums sealed with Tri-Sure seals became contaminated during the flood.
Mr. _____ also states that we had a number of drums of products purchased from another oil company which were sealed with other than Tri-Sure seals and all of them took in sufficient moisture so as to make the material unsalable.
Kindest regards.
Very truly yours,
_____

proving "Tri-Sure" gives 100% protection from TAMPERING, LEAKAGE, WASTE

The letter above is typical of the many that come from all over the world—letters that tell how "Tri-Sure" guards drums from flood or fire—letters that prove again and again that the contents of a "Tri-Sure"-equipped drum are *safe*.

"Tri-Sure" is sound insurance. It is insurance against tampering, leakage and waste. It is insurance that protects your product, your profits and your prestige.

Why not banish *risks* from your next shipment? Why not find out now how "Tri-Sure" can give *your* drums the 100% protection it is giving drums all over the world.

AMERICAN FLANGE & MFG. CO. INC.
30 Rockefeller Plaza, New York

Tri-Sure
CLOSURES

No reason why the entrance to the lubritorium cannot be modernistic, as well as other parts of the service station. This is a new station of the Staebler Oil Co. of Ann Arbor, Mich., located at Brighton, Mich. Photo by the Austin Co., Cleveland

of lubricants in axles states that there is "no limit" to the mileage obtainable with non-corrosive extreme pressure lubricants.

There is still some concern among the "thinkers" in the industry over the apparent inability to harness hypoid lubricants into standardized products. For sulphur and chlorine compounds are on the market, which, when added in specific quantities to a straight mineral, will produce a hypoid lubricant. The problem here, of course, centers around the ethics of the blender, and there is no control over the type of mineral oil he uses, nor is there any jurisdiction over the quantities of the addition agents he uses to complete the lubricant.

Thus, if hundreds of oil companies over the country decide to whip up their own hypoid lubricants by this method, the "men of vision" in the industry can see little hopes for conformity and standardization.

With the possible trend toward leniency in lubricant recommendations for hypoid rear axles, there is also evidence this year of a shifting scene in transmissioin lubrication.

Buick, after specifying an SAE 160 or 140 gear lubricant in summer and SAE 90 for winter for its 1938 standard transmissions, now recommends an SAE 90 extreme pressure lubricant for temperatures above 10 degrees, and an SAE 80 e.p. lubricant for lower temperatures.

Cadillac and LaSalle, while following last year's recommendation of lubricating the transmission with an SAE 90 or 90 e.p. gear oil, adds that in the 1939 transmission "the SAE 90 hypoid lubricant recommended for the rear axle may be used also in the transmissioin".

New to the Chevrolet transmission recommendation for 1939 is the alternative that if an SAE 90 lubricant is not available, an SAE 40 or 50 engine oil may be used, as well as any lubricants other than transmission lubricants which meet the viscosity and channeling requirements of SAE 90.

Studebaker and Nash continue with their former recommendation of an SAE 70 engine oil for summer and SAE 50 for winter for their transmissions. While most cars equipped with overdrive transmissions also follow this recommendation, Packard, since Dec. 1, has been specifying an SAE 90 Packard-approved hypoid oil for its overdrive unit. These overdrive units have been shipped with a metal tag on the filler plug specifying the hypoid lubricant, and as further identification the letter "H" is stamped on the bottom of the unit.

Some lubrication engineers are of the belief that there is a definite trend toward the use of lighter oils, particularly engine oils, in transmissions, and one well-informed engineer points out that five years from now may see transmissions lubricated from the crankcase.

There is a quite general opinion in the lubrication field that the widespread adoption of the steering column shift lever will almost make compulsory the use of light oils in transmissions for winter in order to shift the gears without putting undue strain on the shift linkage.

That there is still a difference of opinion as to the proper lubricant for transmissions is evidenced by the fact that while Oldsmobile, Buick and Pontiac are equipped with similar transmission units, each recommends a different lubricant. For Buick, is an SAE 80 and 90 extreme pressure lubricant; for Oldsmobile, it is an SAE 80 for year 'round service (without e.p. properties); and for Pontiac, an SAE 140 for summer and SAE 90 for winter.

The transmission overdrive has undergone one important improvement. An electrical control, through a solenoid, permits the driver to return to direct drive, regardless of car speed, simply by pressing the accelerator pedal down to the floor board.

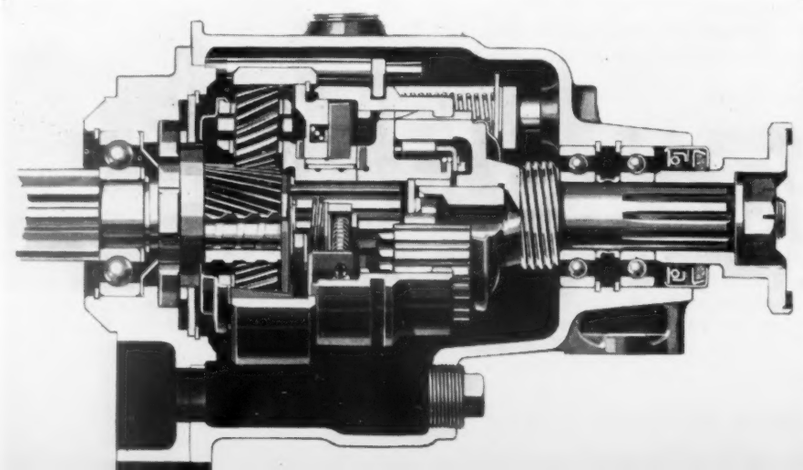
Formerly the cut-in speed for the overdrive has been set at from 40 to 55 miles per hour, but in the 1939 unit the average cut-in speed is about 30 miles per hour and the cut-out speed about 3 to 5 m.p.h. lower. This has been made possible, due to the kick-down feature enabling the use of direct drive at any speed, and permits the use of the overdrive feature in city driving.

In the former overdrive unit it was necessary to slow down below the overdrive cut-in period in order to get into conventional gear.

Briefly, the new overdrive is operated as follows:

When the car has reached a speed of 30 miles per hour or more, the

New to Packard for 1939 is the transmission overdrive, offered as optional equipment on the Six, 120, and Super Eight. Since Dec. 1, Packard has been recommending an SAE 90 Packard-approved hypoid lubricant for this unit



overdrive is brought into operation by simply lifting the foot on the accelerator pedal. The return to third speed for quick acceleration is instantaneous when the accelerator pedal is pressed down slightly beyond the full throttle position. Full range of accelerator control then may be had without a return to overdrive. Fourth speed can be returned by taking the foot from the accelerator pedal momentarily. The overdrive may be locked in or out of operation through movement of a control knob at the instrument panel.

Packard is the only new addition to the list of overdrive-equipped cars for 1939, the unit being available as optional equipment on the Packard Six, 120 and Super 8. Packard's lubrication recommendations for this unit were mentioned above, and on the other cars the recommendations remain substantially the same as last year, with SAE 50 and 70 engine oils predominating.

The overdrive is again offered as optional equipment on the Chrysler Royal and Imperial, DeSoto, Hupmobile Senior Six and Skylark, Nash Ambassador Six and Nash Lafayette, Studebaker, and Graham. It is standard equipment on the Chrysler Custom Imperial, Hupmobile Senior 8, and Nash Ambassador 8.

The two-speed rear axle is again available on the Lincoln-Zephyr as optional equipment.

The automatic transmission, available as optional equipment on Buick and Oldsmobile, has been dropped by Buick for 1939. Oldsmobile continues with it, again recommending the same grade of engine oil as is used in the crankcase.

Oldsmobile also recommends that, as a means of assuring more consistent satisfactory performance, the automatic transmission be flushed out with flushing oil at the end of the first 5000 miles and every 10,000 miles thereafter. It is pointed out that the flushing will remove any contaminated oil, and prevent the formation of shellac around the moving parts which interferes with their normal operation.

One of the most interesting developments of the year is the introduction, on an American passenger car, of the "fluid drive" or "fluid flywheel". This device is offered as standard equipment only on the Chrysler Custom Imperial for 1939.

The fluid drive is a device interposed between the engine and the driving train to the rear wheels. To simplify the explanation of the operation of the fluid drive, picture two electric fans facing each other about three inches apart. If one fan is started, the air blast which it develops will strike the blades of the second fan and start them rotating. Thus the second fan receives energy from the first fan through the medium of the air, which becomes the energy carrier.

This is essentially the principle upon which the fluid drive works, but in this case the shape of the fan blades is changed and the air is replaced by oil. To hold the oil in, both fans are enclosed in a steel housing, which is nearly full of the fluid. One of the fans, which now becomes a paddle, since it is moving oil, is attached to the engine crankshaft.

Facing this first paddle, called the driver, is a second paddle, called the runner which is connected to the rear wheels through a suitable train of conventional type. Thus, in actual operation, the engine turns the first paddle, or driver, which pumps oil through the blades of the second paddle, or runner, and the energy in the moving oil makes the runner turn, thus turning the rear wheels. There is no mechanical connection between the two paddles, and therefore none between the engine and the rear wheels. This feature provides a smooth operation, as no shocks are transmitted through the oil.

The oil is enclosed in the case and cannot escape. So when the driver section of the fluid drive unit is turned by the engine, the oil is thrown outward by centrifugal force, following the wall around, and is finally thrown across the ¼-inch gap and into the other half, striking against the semicircular plates or vanes in this half, and rotating it. The oil follows around the walls of the second half, or runner, and is thus led inward, where it eventually has to cross the ¼-inch gap again and re-enter the first half, or driver.

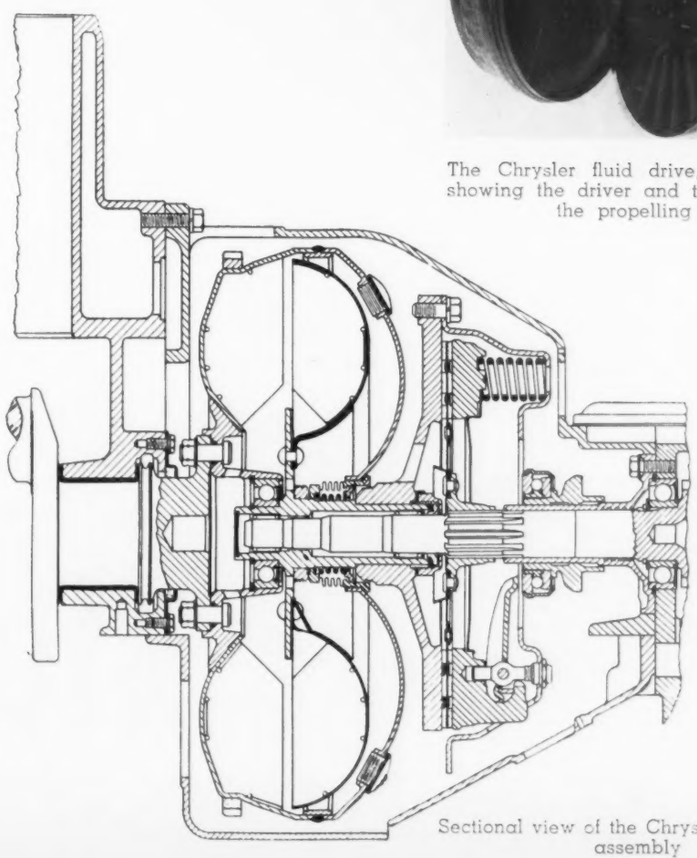
The driver, which is attached to the engine, always turns just a little faster than the runner, which is attached to the rear wheels. This difference in speed between the two members is called slip. In ordinary driving, as on a level road at normal speeds, this slip is very low, being approximately one per cent. Under heavy loads at low speeds, however, the slip becomes greater, and reaches its maximum when the car is left in gear while the engine is running and the car is stopped. This does not kill the engine, as in the ordinary operation when the car is brought to rest in gear without releasing the clutch.

The car may be started smoothly from a stand-still in high gear simply by releasing the brake and stepping on the accelerator pedal, and it may be operated as slowly as desired in high gear without declutching.

Although the driving fluid used in the unit is oil, there is no lubrication problem involved for the service station operator. The oil used is a straight mineral oil of high quality, with low volatility and low pour point, and is in the 10W viscosity range, and the operation is such that the oil does not need to be changed.

The capacity of the fluid drive unit, filled to the proper level, is approximately 8½ quarts.

The Chrysler fluid drive, disassembled, showing the driver and the runner, and the propelling fins



Sectional view of the Chrysler fluid drive assembly

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Is always flexible!

It's a lightweight, super-flexible hose that bends easily, like a rope... has a synthetic rubber, glass-smooth tube that speeds discharge and stays clean as a whistle... a concealed static conductor... and a tough sun and abrasion proof cover... all you want in a modern gasoline hose.

ADVANTAGES:

1 SYNTHETIC RUBBER TUBE... *a smooth gasoline-way, fast discharging.*

2 LIGHTER WEIGHT... *easier to handle; faster service to customers.*

3 A TOUGH CARCASS... *inter-woven with a spiral round SUPPORTING STATIC WIRE; non-kinkable, shape can be quickly restored if crushed.*

4 EXTREME FLEXIBILITY... *permits ease of handling in all kinds of weather. Weather can't get in to destroy flexibility.*

5 NOW PACKAGED... *for your convenience.*

6 APPROVED... *by Underwriters' Laboratories.*

7 RUBBER COVER... *specially compounded to resist abrasion and sunlight, yet mar-proof when in contact with cars and pumps.*

8 SERVICE BEYOND PRICE *and Specifications is a feature of this hose and all other U. S. Mechanical Rubber Products.*

GET THE FULL STORY... THE RECORD OF PROVEN PERFORMANCE, LONGER LIFE, AND SERVICE. GET THE STORY OF PEERLESS ECONOMY.

Average Compression Ratio Unchanged in '39 Models

THE average compression ratio of 49 principal passenger car models for 1939 held to 6.30 to 1, the same as for 1938 models. Some shuffling of ratios occurred however. Buick and Packard made small reductions in the compression ratios of most models. Ford dropped the ratio of the 60-hp. V8 and Graham for one model. These declines were made up largely by Chrysler, with increases for three models. Hudson boosted the ratio for its smallest model, formerly known as the Terraplane and Nash boosted the ratio of one model.

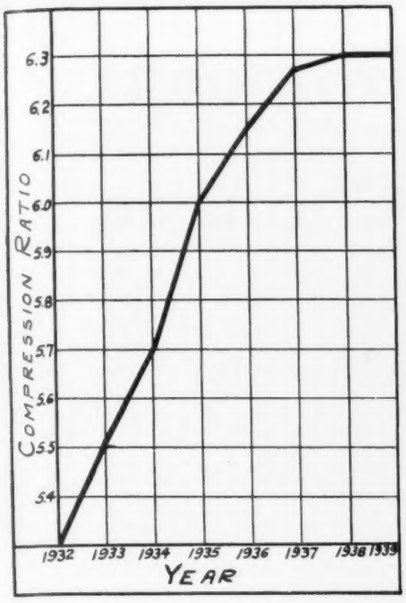
The highest ratio this year in standard models is 6.80 for two Chrysler models. An optional ratio of 7.45 is available on the Chrysler Imperial, which is also highest of the optional ratios available. Many of the optional ratios are below the standard compression ratios and the average of the highest optional and maximum standard ratios available for 1939 is somewhat lower than for 1938 cars.

The general average 1939 piston displacement is 259.9, as compared with 265.4 in 1938. This reduction is due largely to the addition of smaller cars to the number of models available, rather than to an actual reduction in piston displacement in models available both years. These include the Overland, Oldsmobile-Six 60, Pontiac-Quality Six, Mercury Eight, and Hup-

Compression Ratios and Maximum Horsepower Ratings of 1937 and 1938 Passenger Cars

Make and Model	1939 Compression Ratio Std.	1939 Compression Ratio Opt.	1938 Compression Ratio Std.	1938 Compression Ratio Opt.	1939 Horsepower H.P.	1939 R.P.M.	1938 Horsepower H.P.	1938 R.P.M.	1939 Piston Displacement (Cubic Inches)	1938 Piston Displacement (Cubic Inches)
Buick 40	6.10	.....	6.15	.....	107	3400	107	3400	248.0	248.0
Buick 60	6.25	.....	6.35	.....	141	3600	141	3600	320.2	320.2
Buick 80	6.25	.....	6.35	.....	141	3600	141	3600	320.2	320.2
Buick 90	6.25	.....	6.35	.....	141	3600	141	3600	320.2	320.2
Cadillac V-8 61	6.25	6.70-5.75	6.25	5.75	135	3400	135	3400	346.0	346.0
Cadillac V-8 60S	6.25	6.70-5.75	6.25	5.75	135	3400	135	3400	346.0	346.0
Cadillac V-8 75	6.70	6.25-5.75	6.70	6.25–5.75	140	3400	140	3400	346.0	346.0
Cadillac V-12 90	6.75	6.08	6.80	.....	185	3600	175	3600	431.0	431.0
Chevrolet Master 85	6.25	.....	6.25	.....	85	3200	85	3200	216.5	216.5
Chevrolet Master De Luxe	6.25	.....	6.25	.....	85	3200	85	3200	216.5	216.5
Chrysler-Royal C-22	6.50	7.00	6.20	7.10	100	3600	95	3600	241.5	241.5
Chrysler-Imperial C-23	6.80	7.45	6.20	650–7.40	130	3400	110	3400	323.5	298.6
Chrysler-Cust. Imp. C-24	6.80	.....	6.50	.....	130	3400	130	3400	323.5	323.5
De Soto S-6	6.50	7.00	6.50	.....	93	3600	93	3600	228.1	228.1
Dodge D-11	6.50	.....	6.50	.....	87	3600	87	3600	217.8	217.8
Ford V8-60	6.50	.....	6.75	.....	60	3500	60	3500	136.0	135.9
Ford V8-85 De Luxe	6.15	.....	6.12	.....	85	3800	85	3800	221.0	221.0
Graham-Spec. and Cus. Spec. 96	6.50	.....	6.70	.....	90	3600	90	3600	217.8	217.8
Graham-Superch. and Cus. Sup. 97	6.70	.....	6.70	.....	116	4000	116	4000	217.8	217.8
Hudson 112	6.50	.....	6.25	7.00	86	4000	96	3900	175.0	212.0
Hudson Six	6.25	.....	6.25	7.00	96	3900	101	4000	212.0	212.0
Hudson Country Club 6	6.25	.....	6.25	7.00	101	4000	101	4000	212.0	212.0
Hudson Country Club 8	6.25	.....	6.25	7.00	122	4200	122	4200	254.0	254.5
Hupmobile-Jr. Six	5.75	6.20	....	.....	101	3600	...	....	245.3	.....
Hupmobile-Six	5.75	6.20	5.75	.....	101	3600	101	3600	245.3	245.3
Hupmobile-Eight	5.80	.....	5.80	.....	120	3500	120	3600	303.2	303.2
La Salle-V8	6.25	.....	6.25	.....	125	3400	125	3400	322.0	322.0
Lincoln V-12	6.38	.....	6.38	.....	150	3400	150	3400	414.0	414.0
Lincoln Zephyr	6.70	.....	6.70	.....	110	3900	110	3800	267.0	267.3
Mercury 8	6.15	.....	....	.....	95	3600	...	....	239.0	.....
Nash-LaF. Spec. and DeL.	6.30	.....	5.83	.....	99	3400	95	3400	234.8	234.8
Nash-Ambassador 6	6.00	.....	6.00	.....	105	3400	105	3400	234.8	234.8
Nash-Ambassador 8	6.00	.....	6.00	.....	115	3400	115	3400	260.8	260.8
Oldsmobile-Six 60	6.20	5.67	6.10	.....	90	3200	...	....	216.0	.....
Oldsmobile-Six 70	6.10	5.61	6.10	.....	95	3300	95	3400	229.7	229.7
Oldsmobile-Eight	6.20	5.80	6.20	.....	110	3500	110	3600	257.1	257.1
Overland	6.35	6.81	....	.....	61	3600	...	....	134.2	.....
Packard Six	6.52	6.85	6.52	7.05	100	3200	100	3600	245.3	245.3
Packard Eight	6.41	6.85	6.60	7.05	120	3600	120	3800	282.0	282.1
Packard Super Eight	6.45	6.85	6.50	7.05	130	3200	130	3200	320.0	320.0
Packard Twelve	6.30	7.03	6.40	6.0–7.0	175	3200	175	3200	473.0	473.0
Plymouth Roadking	6.70	7.00	6.70	7.00	82	3600	82	3600	201.3	201.3
Plymouth De Luxe	6.70	7.00	6.70	7.00	82	3600	82	3600	201.3	201.3
Pontiac Quality 6	6.20	.....	6.20	.....	85	3520	...	....	222.7	.....
Pontiac De Luxe 6	6.20	.....	6.20	.....	85	3520	85	3520	222.7	222.7
Pontiac De Luxe 8	6.20	.....	6.20	.....	100	3700	100	3700	248.9	248.9
Studebaker Com. Six	6.00	7.00	6.00	.....	90	3400	90	3400	226.0	226.0
Studebaker Pres. 8	6.00	6.50	6.00	.....	110	3600	100	3600	250.4	250.4
Willys	5.70	.....	5.70	.....	48	3200	48	3200	134.2	134.2
Average	6.30	6.39	6.30	6.48	108.0	3533	109.1	3555	259.9	265.4

Compression Ratios



The average passenger car engine compression ratio, after several years of rising, has leveled off at 6.3 to 1 as compared with an average of 5.3 to 1 in 1932 motor cars.

mobile-Jr. Six, which are all below the average in piston displacement.

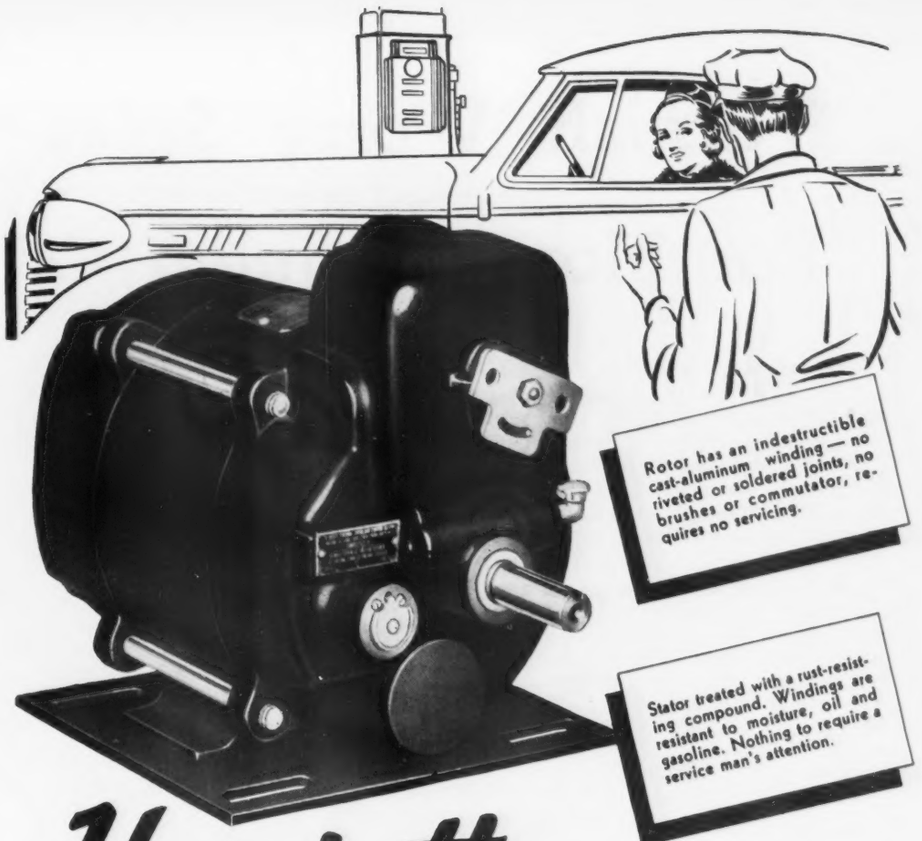
The same reason reduces slightly the average maximum horsepower. The average rated revolutions per minute for maximum horsepower have been reduced by Oldsmobile and Packard in two models each and in two or three other models of other manufacturers. Highest speed engine is the Hudson Eight rated at 4200 r.p.m. for maximum horsepower. Several models have maximum horsepower ratings at the lowest speed of 3200 r.p.m.

Be Careful of Frozen Shackles!

"A frozen shackle can be injurious to the hands and head as well as your temper. In using the bar on the shackles to force the grease through both sides, take an extra moment or two and notice that you are not forcing the bar toward the fellow who is working the gun. A slip sends the bar with great force directly into some vital section of the fellow handling the gun—and with it possible injuries. Take a little time and notice."—Department of Accident Prevention, American Petroleum Institute.

1937 Lube Oils Worth $245,000,000

WASHINGTON — Refineries of the U. S. produced 1,517,102,553 gallons of lubricating oils in 1937, valued at $245,666,434, according to the Census Bureau.


Rotor has an indestructible cast-aluminum winding — no riveted or soldered joints, no brushes or commutator, requires no servicing.
Stator treated with a rust-resisting compound. Windings are resistant to moisture, oil and gasoline. Nothing to require a service man's attention.
Bearings are protected against the entrance of dirt and gasoline, have ample oil reservoirs, and require oiling but once a year. Think of it — servicing but once a year!
The slotted base, choice of four conveniently located conduit outlets, finger-tip voltage selector, and two-arm line-switch operating lever make mounting easy.

Here's the Tailor-made Motor for Gasoline Pumps

NOT only is this capacitor-motor mechanically suited for gasoline pumps, but its electrical characteristics are designed to meet the load demands, as well. It is built with ample reserve torque to meet conditions requiring more than normal output, and will operate dependably through the hottest days and coldest nights, year after year. The reliability of G-E capacitor-motors has been proved — millions of them are operating refrigerators, stokers, and water pumps.

The Underwriters' Laboratories, Inc., lists this motor for use in Class I, Group D, hazardous gas locations. Bulletin GEA-2277 gives additional information. Why not write General Electric Company, Schenectady, New York, for a copy?

Built by Men Who Know Motors, for Men Who Know Pumps

GENERAL ELECTRIC

Filing No. 8260 070-232

'Varnish' Worry Sales Argument For More Frequent Oil Changes

MORE frequent change of lubricating oil is indicated for 1939 automobiles, reversing the rather definite trend of recent years and providing refiners and resellers an outstanding opportunity to boost lagging sales of motor oil in relation to motor fuel consumption.

Closer engine tolerances, use of special metals and surfaces to maintain these clearances, improved piston ring design, higher pressures and combustion temperatures, plus modifications in front-end body design of most new cars—in the direction of bullet noses and lower louvres for air-cooling the radiator—have combined to promote a tendency toward hotter engines.

This inclination toward higher engine temperatures is not a new problem, but has become increasingly important in recent years as engine design improved and body streamlining increased. Most troublesome feature of this development has been the formation of "lacquer" or a varnish-like substance on the upper piston surfaces in some cars under certain operating conditions, resulting in stuck rings, pistons and valves, in some cases.

This situation promises much to the lubricating oil reseller and can be discussed on two rather separate counts. To discourage excessively high temperatures and the possible formation of these varnish-like substances, it is essential that the cooling system be kept clean and free from scale or rust. This will call for thorough flushing of the radiator and cylinder block, at least twice a year, and oftener in areas where alkali water, or water purifying chemicals react with the radiator metal.

This extra profit service is particularly important just prior to the addition of anti-freeze for winter driving and again during the spring when this solution is removed. Studies show that, if scale and rust are not removed in the fall, they will accumulate during the winter and will probably not be completely removed in the spring.

Many station operators have found an additional extra profit item to be added to this service is one of the commercial products offered on the market for preventing scale and rust formation. This is used following the flushing job.

Good results in the flushing procedure are obtained by forcing the solution through the cooling system under pressure, in a direction opposite to the normal flow of water and using air to turbulate the flow.

While increased need for flushing the cooling system indicates a nice profit boost for the alert station operator, a far greater interest lies in the profit possibilities of more frequent motor oil drains and crankcase flushing as a preventative measure in guarding against formation of sludges or other contaminating substances. A residue of sludge left in the crankcase over successive drains has been found to start formation of this contamination in the new oil.

This gives the motor oil reseller plenty of ammunition for selling his customers on frequent and regular crankcase draining and flushing.

It is quite within keeping of good merchandising practices for the reseller to point out to his customer that under certain and almost unpredictable operating conditions, some of the newer make automobile engines have a tendency to get hot and form undesirable products of oxidation, neglect of which might prove costly.

He can then stress the importance of changing the motor oil every 1000 to 1200 miles, and, as a safeguard, the inexpensive insurance offered by complete flushing of the crankcase and cooling systems at least twice a year, or oftener under extreme operating conditions.

What Does "Varnish" In An Engine Mean?

By Arch L. Foster

N. P. N. Technical Editor

The problem of "varnish" or "lacquer" formation in automotive engines today, under certain operating conditions, is being discussed by automotive and oil company engineers. That the cause of this formation is largely the operating conditions developed in modern automotive engines and not the nature of the lubricating oil is brought out in the accompanying article, which was written especially for the New Car Lubrication Number by the Technical Editor of NATIONAL PETROLEUM NEWS.

Continued development in automotive design has brought into prominence the problem of so-called "varnish" or "lacquer" deposition in automotive engines. This problem is potentially rather than actually serious. Many manufacturers of engines state they have some varnish formation in their engines in especially the heavier service types; but, they say, we have had more or less of varnish for many years, and it has not become a serious problem to us.

Other car makers are looking at the problem, and even taking steps, in recommendations for crankcase oils, to avoid trouble-making deposits of a lacquer-like decomposition product formed from some commercial oils in service. One oil will form such deposits, while another, of approximately the same specifications will not do so. Therefore automotive engineers and along with them refining chemists and engineers are studying the problem to determine causes and means of prevention. While it is generally known that such varnishes have been formed since time immemorial, some models of 1937, 1938, and presumably of 1939 vintage show an increase in this formation.

The probable causes of this deposition are manyfold, nine or ten being mentioned by engineers. The anomaly is that these causes in almost every instance spring from what we properly call progress. For instance, one primary cause seems to be that the motor oil remains in the crankcase, exposed to the heat, contamination, and oxidation conditions existing there. The lacquer forms especially on the inside as well as outside surfaces of pistons, on cylinder walls, valve chambers, and sometimes elsewhere. The oil remains longer in the crankcase simply because oil consumption has been materially reduced, instead of being burned up, leaking out or other-

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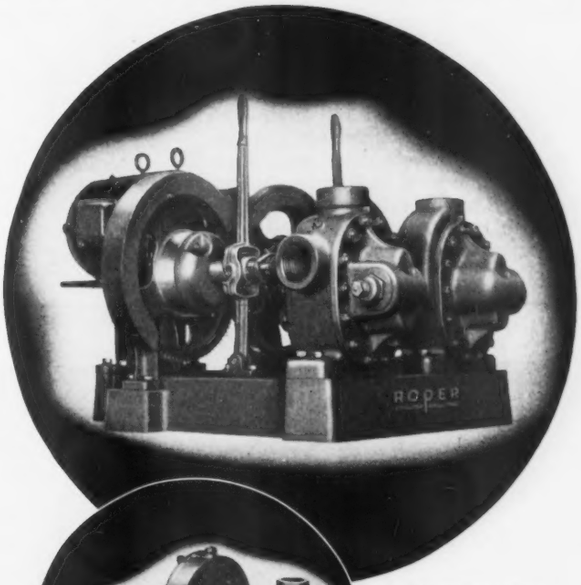
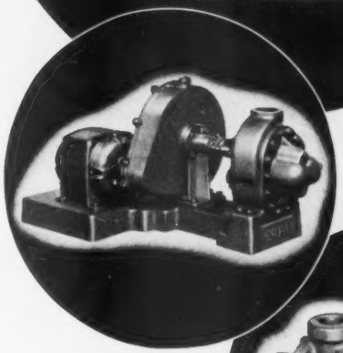


TWIN PUMP UNIT



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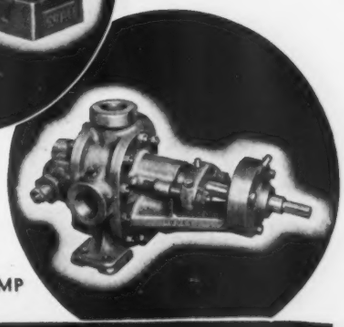

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In bulk plants or trucks you'll find transferring time reduced to a minimum because of the greater speed of Roper Pumps.

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wise escaping from the crankcase, it remains to do its work, exposed to oxidation.

Engineers have progressed far in piston ring design; less oil escapes into the combustion chamber to be consumed. It is known that any portion of oil which remains in the combustion chamber for any appreciable length of time is burned in the 3000°F. and higher temperatures reached there during the short explosion periods. Better, and more, oil rings on the piston skirt return the oil to the crankcase instead of letting it into the upper chamber.

Clearances in engines have been reduced greatly in the last few years. This has been accomplished not so much by making smaller clearance tolerances, which have not changed appreciably, as by making smoother surfaces. Making friction surfaces more uniform and smooth, removing the microscopic "hills and hollows" which exist on less polished surfaces, there is actually less space between friction surfaces through which oil may escape into the combustion chamber. Notable in this line is the super-polishing method now used by Chrysler and possibly being adopted by others, on pistons, rings and cylinder walls. Thus, as the piston travels downward from top position, fewer and more shallow hollows are in the cylinder wall, to retain oil to be burned when in contact with combustion gases.

Bearing Temperatures Hotter?

Many engineers believe that, while water jacket temperatures are not appreciably higher than ten years ago, in fact frequently lower, because of the higher pressures, higher combustion temperatures in our newer engines, the actual temperatures which the oil meets on the bearing surfaces are considerably higher. If so, (and exact data are not very voluminous), the oxidation produced at the higher temperatures is accelerated greatly, even if burning cannot occur.

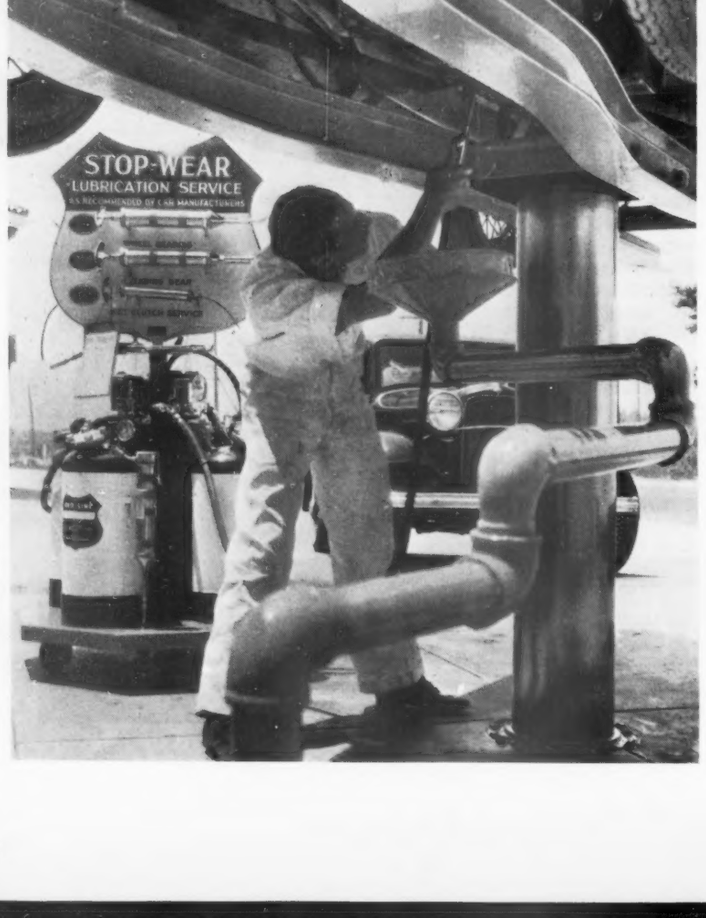
It is known that, generally speaking, combustion chamber temperatures have been gradually increasing, which will increase the completeness of the destruction of the oil actually reaching that temperature. In addition, some of the new bearing materials, under suitable conditions are well known to be good catalysts to promote oxidation. Copper is especially active in this respect. Consequently, minute quantities of these metals, impounded in the oil hasten oxidation; contact of the oil with the metals while passing through the bearing further should aid the reaction. Added to all these conditions, oil is changed, and added, less frequently, increasing the length of time a given body of oil is exposed to oxidizing conditions.

Lacquer formation is considered essentially an oxidation reaction, very possibly combined with polymerization, in which latter case two or more molecules are combined into a single more complex molecule. Oxygen is always present in the crankcase as well as in the air-fuel mixture burned in the chamber. Oxidation is increased in rapidity and in severity as temperature rises, the rate of oxidation being doubled for every 20° to 30° F. rise in temperature, some authorities claim, under certain conditions.

Therefore, all these more severe conditions, promoters of oxidation, have indubitably had the effect of increasing appreciably the amount of oxidation occurring in the crankcase. The thinner films of oil clinging to the inside surfaces of pistons for example, promote the rapid rise of the oil temperature, and the formation of sticky oxidation products which "plate out" on those surfaces, rather than dissolving in the body of the oil. The chemical mechanism of this reaction is of course only incompletely understood, but that commercial varnishes are made from petroleum is well known.

From the point of view of the oil supplier, the trend toward varnish formation, along with acidity and other deleterious effects, is one of the strongest reasons for promoting regular oil changes at regular stated intervals, preferably those intervals recommended by the best authorities. As one automotive authority said recently, oil is cheaper than engine parts and, inferentially, it seems reasonable to say that oil change at regular, not-too-long intervals is less expensive than costly repair bills.

It should be repeated that varnish, as such in automotive engines, has not yet reached anything approaching serious proportions. It is, however, a condition which may be aggravated in present and future models; both automotive and refining engineers are working on the problem to reduce the likelihood of its becoming really serious. The relative cheapness of good oils should make the cost of an "ounce of prevention" relatively low.



For Outside Lubrication Work

Where the lubrication work is done outdoors, portable units provide the means for operators to make use of the showmanship value of the equipment, as well as to benefit by its greater efficiency

Visual Selling WITH "HIGH VISIBILITY" DESIGNS

makes your Station a "SHOWCASE"

"Visual Selling" Stations are here. They give you the same kind of intensive merchandising and selling, employed by the most successful department stores. And besides you have the same modern streamline interior that you find in the best stores. These "Showcase" Stations give tires, batteries, accessories and oil products a chance to sell themselves.

It's the All-Steel Porcelain Building that makes possible "visual selling" at low cost. They are designed from the merchandising angle rather than from the architectural standpoint alone.

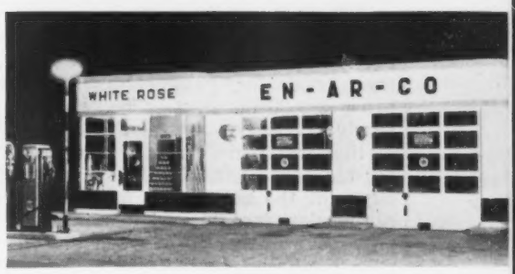
Why go only half way modern when "High Visibility Designs" produce maximum sales results?

New Standard Oil (Ohio) Station in Cleveland. Exterior shows how "High Visibility Design" eliminates all masonry pilasters and other obstructions to a clear view. Note streamline interiors.

Austin Series No. 110 Wall Panels can be used for erecting all three of these types — Standard, De Luxe and Custom-Built. These prefabricated All-Steel stations can be produced in a wide variety of designs using these insulated wall panels. *Prompt delivery from* stock *speeds up completion.* Stations can be easily expanded.

DAY

Austin's "High Visibility Designs" of gleaming porcelain enamel and glass offer double visibility, *DAY* and *NIGHT*. They do a 100% selling job . . .



NIGHT

flag down the motorists and then permit "Visual Selling" of tires, batteries, accessories, services and other merchandise.

Austin Service Stations

—always Stay New . . . look at porcelain stations five years old . . . then look at other types.

—lowest Maintenance Costs of any type of station.

—provide Individual Designs . . . Your own color combinations, lettering and architectural features can be incorporated in these designs.

—uniformity, a selling advantage—they see two and think they have seen ten.

The designs shown on this page serve only to indicate the many types available. The Austin "High Visibility Designs" folder will be sent upon request.

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Please send me a copy of your "High Visibility Designs" Folder.
We contemplate building ..... stations.
Size approximately ..... x ..... with ..... lubritoriums.
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Manufacturers and Builders of Porcelain Enamel and Luminous Buildings

THE AUSTIN METHOD

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Selling Tires And Accessories To New Car Owners

Sell tires to new car owners? Sounds impossible, doesn't it? But NATIONAL PETROLEUM NEWS knows of some alert station operators who make money by going after the owners of brand new cars to sell them premium-priced tires to replace those coming as standard equipment on the cars.

AT FIRST glance, it might appear that the owner of a new car is anything but a Grade A prospect for automotive equipment. His tires are new, his battery in fine condition, his lamp bulbs are all working, in fact he is immune to the purchase of accessories—at least, so some station operators think.

As if to disprove this "obvious" reasoning, an Ohio station operator has built up a sizable premium-priced tire business by selling them to—of all people—buyers of new cars. This operator has obtained the co-operation of a number of car dealers in his territory by getting them to sell a new car buyer on the advantages of putting on a set of his premium priced tires.

If the sale is made, the station operator buys the car's original tires from the car dealer, paying him the list price less 20 per cent. The car dealer receives 27½ per cent of the list price of the tires from the station operator for his part in making the sale. The buyer of the new car is billed by the car dealer for the price of the car plus the difference between the list price of the original tires and the new premium priced tires.

In Oklahoma, an alert station operator along the same lines makes a note of the customers who enter his station in new cars. Following their calls at the station, they are paid a personal visit by the station operator, at which time he points out the type and construction of the tires which the owner has on his new car, and outlines the advantages of replacing them with a better and more costly set.

To make the proposition more interesting, this operator offers the car owner the full retail price on the tires which came on his car, so that the customer gets the set of premium tires by merely paying the difference between the two prices.

The problem then is to dispose of the standard equipment tires taken in on the change-over. An extra factory discount on change-overs permits more leeway in disposing of the trade-ins. This operator points out that he can use these trade-ins for further trade-ins. He averages $20 to $25 on change-overs, and in many cases reports that the profits run even higher by the time he has traded and traded, until he finally acquires a set of tires that are not fit for further trading.

As a matter of fact, the owner of a new car, bulging with the pride of ownership, is a particularly vulnerable prospect for the service station selling accessories. That new car must have the best of care, and the best of everything in the way of accessories, so its owner thinks for some time at least.

That is certainly the station operator's "big moment". For to sell a man something that will add to his pride in his new car is not nearly as difficult a task as making a similar sale to the owner of a used car.

What accessories can the operator of service stations legitimately offer the owners of the 1939 automobiles?

Let's take car heaters. The heater is standard equipment on only one model of one car in the 1939 line-up, and optional on others. This means that some new car owners will purchase heaters from the car dealers at the time the cars are delivered. Others, the majority, will buy their new cars without heaters. On these the station operator can swing into action.

One heater manufacturer estimates that approximately 20 per cent of the new cars purchased in 1938 were equipped with heaters at the time of delivery. The 80 per cent went on the road heater-less, vulnerable prospects for the station selling heaters.

Practically all 1939 cars are equipped with windshield defroster vents, which operate in conjunction with a heater. That is an added sales point which the station man can use to promote the sale of car heaters.

Car radios are another item that will appeal particularly to new car owners. None of the 1939 cars offer a radio as standard equipment, although most of them provide space for such a unit. One large manufacturer of car radios estimates that, of the new cars sold in 1938, only five per cent were equipped with radios at the time of delivery, leaving 95 per cent of the 1938 new cars as potential customers for car radios.

MOST of the large radio manufacturers make radio control panels in a variety of shapes to fit the contour and space provided in many of the 1939 cars, and service stations, particularly in the larger centers, are able to arrange deals with local companies who make a business of installing these units. Thus, often the station can make the sale and send the car to the installation concern for putting the set in.

Lamp bulbs are an important profit item for the service station. The number of lamps per vehicle is steadily increasing, which of course, will swell the renewal sales. Lamp bulb kits containing assorted sizes, as well as fuses, are valuable accessories for the new car owner to carry in his car.

According to one large lamp manufacturer, there is an average of at least one more lamp socket on the majority of new cars. This company reports that in 1937 the lamp renewals were 71 per cent, jumping to an estimated 80 per cent in 1938, and it predicts that in 1939 the renewal percentage will go even higher.

An estimated 111,000,000 auto lamps were replaced in this country in 1938,

The lamp bulb kit is only one of the many "immediate" accessory items that every owner of a new car should have

Sell the New Car Owner These Accessories

Premium-priced tires
Car heaters
Car radios
Lamp bulb kits
Windshield wipers (for dual operation)
Rear window wipers
Oil filters
Sun visors
Cigar lighters
Clocks
Polishes and cleaners
Polishing cloths
Insect screens
Sun and snow glasses
Winter fronts
Chains
Fog lights
Spot lights
Fender guides
Bumper guards
Seat covers

according to this manufacturer's figures. It is interesting to note also, that on 40 of the 50 models introduced in 1939 there are two tail lights.

That good old reliable accessory, the windshield wiper blade, also offers selling opportunities on the 1939 cars. For, although more cars are equipped with dual windshield wipers, there still remain 16 out of the 50 new models that are equipped with only one wiper. Here, then, is an opportunity to sell the extra wiper to owners of these 16 models.

A new item has recently appeared on the market in the form of a windshield wiper for rear windows, which, it must be admitted, has considerable practical value.

There is the fact, not to be overlooked, that the increase in the use of dual windshield wipers automatically increases the replacement market for these items.

The oil filter, like the windshield wiper, offers a double-barreled sales opportunity, for whether or not a car is equipped with a filter, there is an opportunity to sell a replacement cartridge or a complete new unit. Out of the 50 models of the 1939 cars, 17 have oil filters as standard equipment.

Sun visors may well be given consideration by the station operator in selecting stock to meet the requirements of owners of 1939 cars, for while the majority of the 50 new models are equipped with two as standard equipment, there are 22 models which furnish only one sun visor, and one car that has none. Thus the sun visor offers potential business to the station operator from the new car owner.

Cigar lighters are furnished as standard equipment on 26 of the 50 new models, leaving the owners of the 24 remaining models as potential purchasers. Clocks are not supplied on 22 of the 1939 models.

There are many other "immediate" accessories which can logically be offered to the owner of a new car, items which are not included in the purchase of the car and which contribute to the continued efficient operation and neat appearance that the proud owner desires of his car.

Among these items are polish, cleaner, waxes, polishing and dust cloths, insect screens, sun and snow glasses, winter front, chains, fog and spot lights, fender guides, bumper guards, and seat covers.

The important thing to remember in selling accessories to the owner of a new car is that he is more proud of that car now than he will ever be. Any accessory that you try to sell him should be given a sales appeal that will add to that pride.

On the other hand, the owner of a new car is often on his guard against those who try to load him down with "gadgets" which may be ornamental but rather useless. Therefore, be sure that your new car accessory sales efforts are on items that are practical and that have a legitimate appeal.

The ONLY Pumps that *Renew* Themselves AUTOMATICALLY

Moving parts in any BLACKMER Rotary Pump consist of the rotor and set of swinging buckets. These buckets receive the brunt of all wear. But, as the buckets wear, a remarkable thing occurs—they take up their own wear automatically.

Thus in reality a BLACKMER Pump renews itself as it runs!—with no perceptible loss of efficiency until the faces of the buckets are practically worn away.

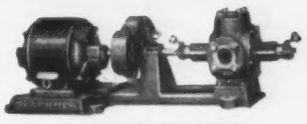
And, when the buckets finally require replacement, entire job can be done in not over 15 minutes—new buckets costing less than 5% of the original pump cost. This is Economy No. 1.

STANDARD UNITS for Every Requirement

Economy No. 2 is due to the completeness of the BLACKMER line—such a wide range of types and sizes that our STANDARD units meet practically every pumping requirement in the petroleum field. This feature often eliminates the need for special, expensive equipment.

Ask to have the nearest BLACKMER representative call at your office. That's a sure way to get the results you're after—and at low cost.

BLACKMER PUMP COMPANY
1876 Century Ave. Grand Rapids, Mich.



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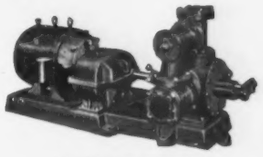

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Standardized throughout for low first cost, using standard motor. Complete and compact. Equipped with BLACKMER Bucket Design Pump, Base, Strainer, Bypass and Lubricated Drive. Sizes to 700 GPM; also built as Twin Units with two pumps.

HAND PUMPS

Easy to turn—fast, positive action—capacities to 20 G.P.M. Ideal for pumping from drums or barrels, or mounted on small tank trucks. Suitable for handling any petroleum product from light oils to heavy greases.

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AUTOMATIC TAKE-UP FOR WEAR
EXCLUSIVE BUCKET DESIGN

Offsetting "Free" Services With New Profit Items

By Jack Westsmith
N. P. N. Staff Writer

Does lubrication service pay? This question cannot be answered in the affirmative by any service station operator who confines his merchandising of such services rather strictly to chassis lubrication and the usually accompanying oil drain.

The purpose of this article is to show that profit possibilities in the lubritorium extend much further than the basic chassis service, and thereby more than offsetting the "free" services that are given today.

To the operator who is in business for something besides his health and who wants to be sure his motorist customers buy from him every product and service needed in running the automobile—without overselling in any way—the chassis lubrication is just an entering wedge for cashing in on a long list of "plus" sales which will show much higher percentages of net revenue than the chassis job.

NEED for adding to the number of profit-paying services offered by a modern service station has come to the front in recent years as competition for motorist good will and repeat business has progressed to the point where the customer has come to expect everything from a Spring housecleaning to something approaching a complete motor overhaul with each chassis lubrication.

A dealer instructor in lubrication procedure for one west coast marketing company estimates the actual service work on an average car requires about 40 minutes with the proper equipment, and that it takes approximately the same amount of service to perform the courtesy services.

In this build-up for customer appreciation it is not uncommon—on the Pacific Coast, at least—for a station to vacuum and dust the car interior, including the compartment floors and dash; clean all windows, inside and out; polish the chrome; clean the head and tail light lens, dress the running boards and tires, check tire pressure, tighten obviously loose bumper and body bolts, and make a report to the customer of any mechanical defects observed.

It does no good to ignore these supplementary services, because Joe Sellem down the street, or around the corner, knows what the motorists want and is out to see that they get it. The successful service merchandisers, a few examples of which will be pointed to later on in this article, have found the answer to the courtesy service problem—and it is a problem—is to increase the average "take" on each car coming in for service.

That is, with the non-paying supplementary services performed and out of the way, any additional service sales will register their full profit.

One California marketer tells its dealers they should average not less than $2.35 on every car coming in for lubrication, which on 100 services a month would mean $235, at upward of 80 per cent profit. This is a big improvement over 100 chassis jobs at $1 each, where labor on the courtesy services will cut deep into the net profit.

Many operators, who have given the extra profit angle serious thought, have found it possible to increase the per car sale of lubrication services to sell above this $2.35. Believe it or Not, they find it is no trick at all to interest the fond car owner in services which are specified by the manufacturer and which can be stressed in the interest of safety, comfort, and economy of operation.

Included in this list of "plus" profit services which the service station operator can and should offer his customers, but which are not capitalized on to the fullest extent at the average station, are such services as front wheel bearing lubrication, transmission and differential drains, cleaning of air

"Tex" demonstrates use of a front wheel bearing packer as an aid to "plus" sales in the lubrication department. Proper equipment builds customer confidence and reduces labor and time required for the service. In addition to the packer, the merchandising display includes a pressure gun and bucket for washing the bearings, a bearing knock out bar—at base of packer—a drying stand and a cabinet for stocks of bearing replacements

NEW PROFIT SERVICES FOR THE LUBRITORIUM

A gross profit of $50 a month was the revenue collected by W. H. Enright, Richfield dealer for the first six months after this hot oil flushing equipment was installed. C. H. Feadler, in charge of lubrication service, demonstrates on a differential. Customers at this station were found willing to pay $1 for flushing of the crankcase and 75 cents for the T and D combination

filters, repacking covered springs, refilling shock absorbers, and last but not least, flushing crankcase, differential and transmission housings.

These services are naturals for the service station, particularly for the independent dealer, because labor is a large part of such jobs and because the total profit for a day's work is limited only by the operator's ability to merchandise the services and do the work.

In other words, this means that the amount of extra profit service a dealer can turn out is tied in with a thorough knowledge of the most efficient methods and with the proper equipment to do the job.

For example, in repacking front wheel bearings, estimates place the amount of lubricant used per car at less than one pound, or from 10 to 15 cents for the two wheels. At a minimum charge of 50 cents a wheel—which will run up to 75 cents and $1 per wheel on large cars—the profit over cost of grease is from 85 to 90 cents per car, or an average gross profit of between 566 and 900 per cent.

Although it is possible to repack the bearings by hand, considerable time is saved and a better job is done with a wheel packer, several makes of which are on the market at prices of around $4 to $8. A bearing knock out bar, for removing the inside bearings without damage, is recommended in this operation. It costs about $1.50 and will fit any bearing found on the average passenger car or small truck.

With this equipment, bearings on both wheels can be packed in from 20 to 30 minutes. Without the equipment, the job will take about 40 minutes. There is growing use of a complete merchandising cabinet, which costs about $35 and includes a bearing packer, a gun and bucket for thoroughly washing the bearings, facilities for holding the bearing while drying, and shelves for a complete assortment of spare bearings.

Replacement of chipped or worn out bearings is a part of the repacking service often overlooked by the service station operator, although the operator does not have to sell the customer on new bearings, or the value of periodic wheels lubrication, if he shows the damaged rollers or balls, and the flakes of metal in the old grease. The profit on one new bearing and race—which should be put in if the bearing is damaged—is more than on the lubrication service.

Much has been written on the proper procedure in repacking front wheels and we will not go into that here, but the service can be sold most car owners every 5000 miles, particularly right after winter and summer driving leave the bearings contaminated with water and dust. A good selling point is; "insurance companies estimate 55 per cent of unavoidable accidents are caused by defective front wheel bearings."

There is more profit in transmission and differential gear oil changes than in a chassis lubrication, particularly if the customer is sold on the advantages of flushing old grease out of the gear cases.

The average T and D change, flush

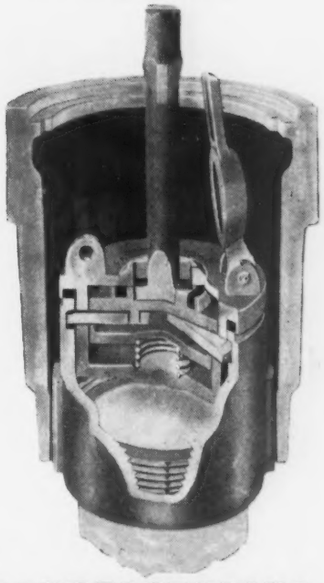
INSTALL THE NEW

Oilco

FLUSH-TYPE FILLBOXES

They set a new standard in all-round safety and efficiency. The OILCO fill box meets a long-felt need in the oil industry because it is

1. Theft-proof
2. Flood proof
3. Frost proof
4. Quick opening
5. Threadless



Sectional view shows the sturdiness and simplicity of its working parts. The cap must be in locked position before key can be removed.

The OILCO Flush Type Fill Box has been adopted as standard equipment by several leading oil companies. Write for illustrated catalog-circular of these and other efficient fill boxes.

OIL EQUIPMENT MANUFACTURING CO.
INCORPORATED
312 Montana Ave. Louisville, Ky.
Manufactured in Canada by
Empire Brass & Manufacturing Co. Ltd., London, Canada

and refill, takes about 30 minutes, with the average differential requiring from 2.5 to 3 pounds of grease and the average transmission about 2 pounds, or from 4.5 to 5 pounds for the complete job on most cars.

Bought in 110-pound drums, the average service station cost for e.p. and hypoid lubricants is about 11 cents a pound and sells for 25 to 30 cents a pound, which on a 5-pound refill represents a profit of 70 to 90 cents per car. Gear oil costs about 9 cents a pound, affording a slightly higher profit but requiring additional equipment and storage for a product that will not meet factory specifications for most modern cars.

New grease is only half the selling job on T and D servicing. The other half is the flushing service, which for satisfactory results requires special equipment. Cost of this equipment covers a wide range with the results obtained just about in direct ratio to the expenditure, with the more elaborate units having the additional advantage of an effective aid in merchandising the lubrication and flushing services.

B. J. Rutherford, manager, Associated Station 807, Los Angeles, performs an air filter service on a 1938 Studebaker in eight minutes by the clock and collects 35 cents. The charge is 50 cents for the reservoir type filter. Cleaning air filters is a profitable extra revenue service overlooked by many station operators

USE A CURTIS LIFT
- to sell the idea - to do the job

It's much easier to sell customers under-car services when you can *show* them the need. A CURTIS Lift will enable you to initiate more of this profitable business, and then make the work itself a lot easier to do at less cost. Here's how a CURTIS LIFT will help you:

1. **Better, Faster Lubrication.** "Hard-to-get-at" places easily accessible. Better light, more "elbow room."
2. **Better Shock Absorber, Brake and Tire Service.** Wheels hang free; work done at convenient height.
3. **More Thorough Car Washing.** People like their cars cleaned underneath, too, not just a "body-wash."
4. **More Effective Electrical Service.** Easier to inspect, install or replace light wires, stop-light switches, radio wiring and antennas.
5. **Safety Inspection.** Customers appreciate discovery of loose bolts or broken parts underneath. Care prevents accidents.
6. **Easier to Sell Service.** When customers see what needs to be done—the sale is more certain.

Here's why your lift should be a CURTIS:

COMPLETE ACCESSIBILITY — every lubrication point easily reached

HANDLES ALL CARS — any make, any model

SELF-LEVELING PLATFORM — won't stick coming down

DROP-AWAY WHEEL GUIDES — automatically center car

ABSOLUTE SAFETY — oil-locked, 4-ton capacity

Send for new free 16-page booklet, "More Profitable Service."

CURTIS PNEUMATIC MACHINERY CO.
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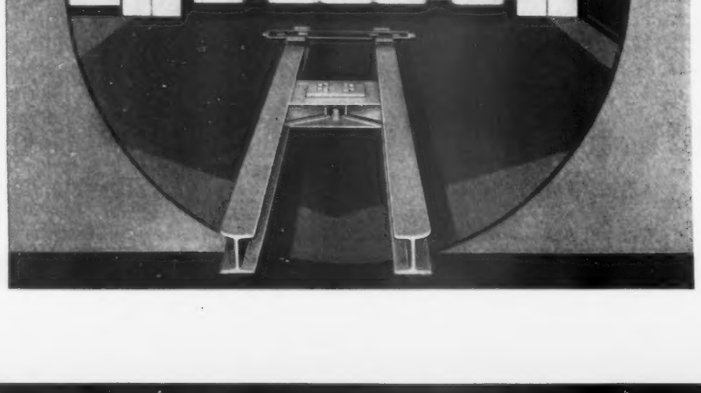


Talks with service station operators using special flushing equipment point to big profits where the service is properly merchandised. The minimum charge for a thorough flushing job is 50 cents a case, although dealers with the larger equipment find no difficulty in getting 75 cents to $1. The profit is upward of 75 per cent, including depreciation of equipment, and refilling after flushing usually means a larger sale of grease—a gear case of 3-pound capacity will take an additional half pound of grease.

One Pacific Coast company has found considerable satisfaction with a chemical solvent vapor method for flushing transmission and differential cases. Temperature of the vapor is about 170 degrees F., which is hot enough to remove the grease film from the gears and inside of the case, and leave the gears bone dry with no residue to cut the new grease. Temperatures of the gears and case are raised to about 150 degrees, so that the new lubricant immediately forms a protective oil film on the wearing surfaces.

Crankcase flushing following an oil drain is another important extra profit service for the alert service station operator, and again one that is easy to sell. The charge here is 75 cents to $1 where flushing equipment is used.

However, one California marketing company hit upon the profit possibilities of selling job with the car engine doing the work. On a six-quart capaci-

From $1 to $1.50 and up per car is the "take" in repacking covered springs on the modern automobile. Many cars on the road for a year or more are ripe prospects for this service

ty crankcase, its dealers recommend the use of eight quarts of flushing oil, enough to assure plenty of splashing action in washing down sediment. Experiments showed this procedure removed most of the sludge, sand, and other particles that were not taken out by the draining motor oil.

Cost of this flushing oil to the station is about 32 cents a gallon and it sells for 80 cents, a net profit on eight quarts of 96 cents. Of course, this service cannot be sold the motorist after every oil drain, but it is valuable at least twice a year. It might be pointed out that this service might fall victim to the sales talk of another station offering a pressure-flush at 75 cents or $1.

Now we come to one of the services offering the easiest profit, yet probably the most overlooked revenue producer of any item on the automobile, the air filter. In general these are of the screen and reservoir types, both requiring cleaning every 3000 miles, at least, and every 1000 miles, or even less, where operating in dust laden air.

By the clock it took a Los Angeles service station operator 8 minutes to remove, clean, dry and saturate with 50 S.A.E. motor oil the screen of a filter on a 1938 Studebaker. The service charge was 35 cents and would have been 50 cents had it been a reservoir type, which requires about a pint of the heavy lubricating oil. With a "lube" job the charge is often 25 and 35 cents for the two types of cleaners. About two-thirds a gallon of solvent is used in cleaning the units.

Air filter service is looked upon as a great little customer confidence builder by operators who emphasize its importance. It is an excellent talking point at highway stations where opportunities to sell chassis lubrication are likely to be few and far between. By the use of this entering wedge, highway dealers have found it possible to sell the need for a "lube" job and other services.

Some dealers take as sales ammunition the thought that a dirty air filter is the same as using too much carburetor choke; that the service will reduce the motorist's fuel bill, improve performance and prolong engine life. The dealers for one west coast oil company guarantee results. They ask the motorist to watch the cleaning job and then, if not satisfied after driving around the block that engine performance is improved, there is no charge. It is reported one woman customer was so impressed by the results that she paid $1 for the service.

The 5000-mile periodic lubrication of covered springs is another extra profit possibility often overlooked by the service station operator. Special equip-

200,000 service men can't be WRONG

Last Spring hundreds of lubrication outlets were contacted by personal call as a follow-up on two years of intensive advertising by Acheson. In this survey, use of "dag" colloidal graphite in crankcase, top cylinder and spray oil was covered. But what we really wanted to know was — is there a need for a rubber lubricant? The answer was emphatically "yes". We found squeaking rubber parts to be the "pet peeve" of the grease rack attendant. No matter how carefully he does his work, there are "come-backs". In desperation, he has even tried spraying brake fluid on offending points – it will keep them quiet for a while. Realization of this and the fact that a solution must be provided with a non-petroleum product led Acheson to the working out of formulas, which have been patented, in which "dag" colloidal graphite is the basic part. The extremely minute particle size of the graphite assures ready penetration. The presence of this solid lubricant is the one reason why squeaks *stay away longer* than with a product minus this material. Added to these benefits is the ease of applying a rubber lubricant containing "dag". Any standard spray gun is suitable and for hard-to-get-at places a needle spray gun can be used to advantage. Selected marketers may blend a "dag" colloidal graphite rubber lubricant of their own or purchase a ready-for-use product from concerns who will package under the marketer's own trade-mark. We will gladly supply the names of several such companies. Send for folder.

6 ADVANTAGES OF A "DAG" RUBBER LUBRICANT

NON-INJURIOUS TO RUBBER

NON-POISONOUS

PENETRATES QUICKLY

LONG LIFE

EASY TO APPLY

NON-INJURIOUS TO METAL FINISHES

ACHESON COLLOIDS CORPORATION

PORT HURON, MICHIGAN

dag COLLOIDAL PRODUCTS

ACHESON COLLOIDS CORP., PORT HURON, MICH.
Please send gratis, story on "dag" Colloidal Graphite.

NAME .....

ADDRESS .....

TABLE I

Sales and Profit Possibilities Per 1000 Gallons of Gasoline Sold

(As figured by one Pacific Coast oil company)

Product or Service	Approx. Cost to Motorist	Approx. Total Cost to Motorist	Approx. Gross Dealer Profit
Crankcase Drain, Refills and Additions			
26.5 Gals. Motor Oil	$27.83		
9 Gals. Flushing Oil	3.60		
		$31.43	$13.55
Lubrication			
15 Chassis Lube Jobs	$15.00		
26.5 Lbs. Gear Lub. and Grease	6.63		
3 Front Wheel Lub. Services	3.00		
2 Covered Spring Lub. Services	3.00		
3 Shock Absorber Lub. Services	2.25		
		29.88	25.40
White Products—8 Gallons		1.76	0.68
Tires and Tubes—3 Each		46.65	13.06
Batteries—1		7.40	2.22
Accessories			
3 Cans Radiator Flush	$1.80		
9 Spark Plugs	5.85		
1.5 Oil Filters	3.38		
5 Lamp Bulbs	1.30		
1 Fan Belt	1.25		
1.5 Windshield Wiper Blades	0.53		
1 Can Polish	0.75		
1 Battery Cable	1.00		
		15.86	6.34
Washing and Polishing		16.50	14.85
Miscellaneous Accessories and Services (Radios, Heaters, Tire Repairs, Battery Recharging, Air Cleaner Service, etc.)		6.75	3.38
TOTAL		$156.23	$79.48

ment is required here, usually in the form of a clamp which is used together with a pressure gun in forcing lubricant into the cover.

Cost to the motorist for this service is 75 cents for each spring—usually only the rear springs are covered—or 50 cents with a regular chassis job. The operation requires up to a pound of grease and takes about 20 minutes per spring, which means a gross profit of 80 cents to $1.30 per car.

Shock absorbers are a close second to air filters in being ignored by most station operators and yet here is an item that pays substantial dividends to the service man who is willing to learn the how, when and why of this operation. It is a service that requires more experience than cleaning air filters, but not any more than is necessary in the proper repacking of front wheel bearings.

Good practice dictates the use of fluids recommended by the car manufacturer. Some special equipment is essential, including a variety of wrenches and small tools for working in close quarters, and a low pressure gun with a flexible nozzle. If the shock absorber does not have to come off the car for service, the operation takes about three minutes and the charge is 35 cents per unit. If it must be removed, add about 15 minutes and the charge is 50 cents each.

Radiator flushing can rightly take its place along with these extra profit services. Dirty, rusty water observed on the pump island has often led to a radiator cleaning job and has paved the way to solicit lubrication and allied services.

It is recommended that radiator and cooling systems be drained and flushed at least once each year—twice a year if anti-freeze solutions are used. The charge on the west coast for this service is usually 50 cents, takes no extra time and the profit is about 60 per cent.

In addition to these additional service sales, the lubritorium is also the super contact spot for merchandising the various accessory items such as tires, batteries, spark plugs, oil filter, light bulbs, fan belts and so on, which go to complete the one-stop plan of balanced selling.

What is the average customer worth to the service station operator who emphasizes each and every department of his business for all it is worth. Dealers for one west coast company are told they have an opportunity to sell $156.23 worth of products and services —excluding gasoline and repairs—for every 1000 gallons of gasoline sold. Furthermore that their gross profit on this will be approximately $79.48, or nearly 8 cents extra margin per gallon of gasoline. Table I illustrates the source of this revenue.

Not many stations will achieve this performance, but some will do better than these quotas and it has been found that by having some kind of a standard as a goal the average sales record will be raised for all outlets.

W. H. Enright, Richfield dealer on the corner of Vermont and Franklin aves., Los Angeles, illustrates the value of that slogan: "Ask them to buy and tell them why."

With C. H. Feadler in charge of lubrication service, this station turns out about 200 chassis "lube" jobs a month, about 50 transmission and differential drains—grease sales are about 250 pounds per month, the reason will be clear in a minute—about 35 front wheel bearing lubrications, 20 to 25 air filter services, and some spring repacking and shock absorber services, although Feadler says most of his customers turn their cars before there is actual need for attention to these parts.

Where the station has really "gone to town" has been in flushing crankcases, transmissions and differentials, using a hot-oil flushing unit that cost somewhat in excess of $300 and was paid for on an installment basis at $13 per month. In the first six months of operation with this piece of equipment, the gross profit was $50 a month, which was collected on the basis of $1 for the crankcase and 75 cents for the combination T and D service—35 and 40 cents, respectively, if separate.

W. D. "Bill" Gray, Texaco dealer, 3rd and Serrano, Los Angeles, has built his business around a personal solicitation plan which calls for each of three employes to make not less than five neighborhood visits per week and to make a report on each. For every call not covered by a satisfactory report, 50 cents is deducted from that employe's check—not many deductions have to be made. Gray says his customer and prospect files are the most valuable facilities he owns, when it comes to maintaining a steady flow of business through the station.

He believes these records are particularly important in boosting the sale of extra profit services at periodic intervals. With a gallonage of about 10,000 gallons a day, this station averages 130 chassis lubrication services, 20 wheel packs, 10 covered spring lubrications, 10 oil filters, and sells about 100 pounds of gear grease a month.

In common with some other dealers, this operator made the early mistake of including the air filter cleaning among the courtesy services rendered with every chassis "lube" and it is too late for any attempt to change this situation and take advantage of a very logical source of extra profit. Once a customer gets accustomed to a free service it is difficult to put this service on a paying basis, without losing some customers.

It might be pointed out that some operators have found their customers willing to pay something extra when a vacuum is used on the car interior and upholstery and have thereby reduced that long list of free services and have added to the growing list of extra services on which a charge can be placed by the station.

Good Housekeeping Tips For Lubritoriums

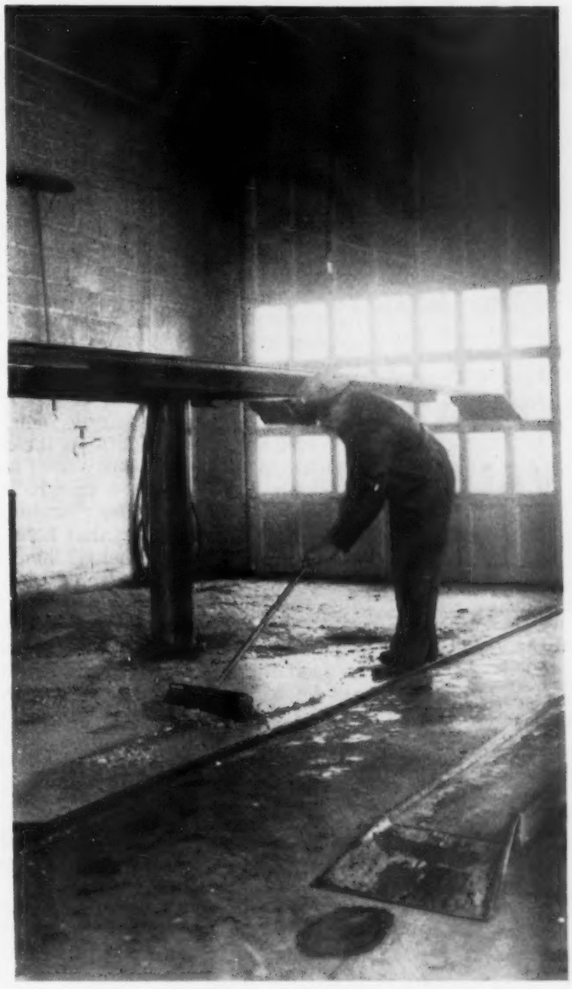
GOOD housekeeping in the lubritorium is a "must", for the merchandising value of having the department attractive for customers watching the work, to aid in preventing the theft or loss of small tools, and to keep dirt from being tracked to other parts of the station.

Policing up the lubritorium is being done by midwestern marketers in three steps. First, there are some elements of construction that the marketer can consider in building or remodeling a lubritorium that will make good housekeeping easier for the operator. Second, is the routine for the operator to follow in policing the lubritorium thoroughly each day and cleaning up after each job if time permits. Third, is the supervision by the marketer of company operated stations, and suggestions for lessee or dealer operated stations, to insure good housekeeping.

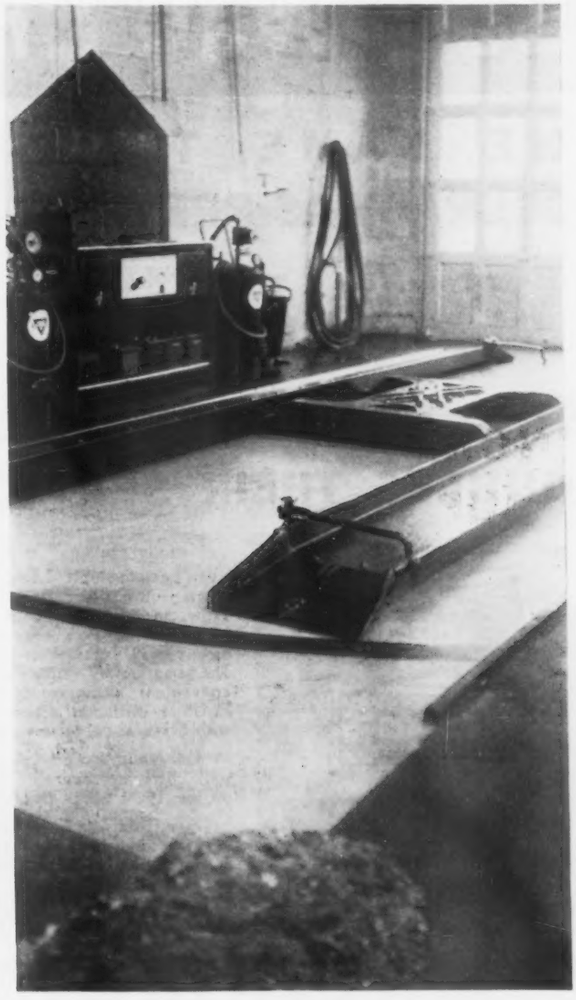
Good housekeeping can start in the building or remodeling of the lubritorium, in the selection of materials for interior walls that can be cleaned easily. Marketers indicate a preference for glazed brick or tile, or enamel plates. First cost is higher, but marketers point to savings over the years in smaller painting bills and in cleaner walls. A little cleaning compound and some elbow grease and the operator can clean the walls as often as necessary.

Clean, attractive interior walls, however, need not wait for a remodeling job. The walls can be brightened right away by applying light colored paint. The cost is small, and if the marketer can use labor from the station the price scales down to an outlay for several gallons of paint. One marketer, for instance, has concrete blocks on a lubritorium interior walls. Ample windows let in much light, yet the department seemed dingy. The jobber brought up spray equipment from the bulk plant. Station men did the work, and for $15, covering the cost of three gallons of aluminum paint, the marketer covered the walls and ceiling of a two-car lubritorium, and he estimates the job will last about three years.

The lubritorium floor is another point where the marketer can aid the station operator to better housekeeping. Most lubritorium floors are of concrete, and the surface can be made smoother and cleaned easier through painting. In case the marketer elects



A station operator on the last lap of cleaning up after a lubrication job, sweeping up the cotton waste material



The job is completed, the lift has been wiped, and equipment against the far wall is in place

not to paint the entire floor the part around and under each lift can be covered. A half-gallon of paint will cover the area around and under a lift. The paint job should be renewed once a year, or oftener if the paint begins to look shabby where operators have given the floor extra heavy service. For fancy trimming the paint job can be outlined in some bright color.

Another factor in policing up a lubritorium is keeping grease containers in the basement or in a separate store room. Some city ordinances do not permit basements in service stations, and some stations are not equipped with store rooms. In such cases the containers should be pulled from the walls during the daily cleaning job, and also wiped off.

Empty motor oil cans scattered around a lubritorium spoil good housekeeping. Marketers recommend putting empty cans in a trash barrel back of the station, or in a store room. If this is not possible the cans should be put in the cardboard carton kept in a corner of the lubritorium, and carted away, before the cans overflow on the floor, by the gasoline truck.

The actual policing of the lubritorium by the station operator is a continuous job. It includes a routine for a thorough sweeping of the floor and wiping off containers, tools, lifts and equipment once a day. Then tools should be wiped, also the lift, and the grease removed from the floor and any dirt swept out after each lubrication job, if time permits. Windows should be washed, and interior walls wiped down as needed. One marketer recommends to his operators cleaning the windows twice a week in summer; on Tuesday, as the first of the week is usually dull, then again on Friday just ahead of the week-end rush. In winter windows may need attention more often if there is much soot in the air.

For a thorough cleaning of the floor and equipment some marketers recommend the work be done at night just before closing. In case there is a late customer then the work is put over until morning. Other marketers recommend the cleaning be done in the morning as part of the station opening routine.

Two brooms are recommended. One should have stiff bristles to remove the larger chunks of mud and gravel, then a soft bristled broom to get off the fine dirt and dust. Marketers recommend buying good brooms. Brooms get heavy service around the lubritorium and the longer life of a good broom more than offsets the additional first cost, so in the long run the better equipment actually costs less.

Powdered lime can be sprinkled on the floor during the cleaning to brighten the bare concrete. Another cleaning tool, for the floor and also the lift, is to swab them with a mop dipped in kerosine. On a painted surface around the lift one marketer has the loose dirt swept off first. Then the operator goes over the paint job and the lift with the kerosine mop, and finishes by sweeping a cotton waste compound over the painted floor. The whole operation takes about 30 minutes, but leaves the floor immaculate.

Kerosine or gasoline is used by marketers for wiping grease off tools, the lift, and any grease spots on the floor, and the maximum quantity used would be about three gallons a month. Some station operators dip the cleaning rag in the five-quart oil can that holds the gasoline for cleaning wheel bearings. Waste can be used for wiping off tools and equipment, costing around eight cents a pound and about 12 pounds would be used in a month. If kerosine is used the tools and equipment then can be wiped dry with clean waste or with paper napkins if the station uses these in checking crankcases. An average lubritorium would use about $2 worth of paper napkins a month.

One marketer recommends the following daily routine for the lubritorium as part of the day's opening task. First clean the floor. Clean the lift with a kerosine rag. Dust the merchandise displays in the lubritorium and once a week, Friday preferred ahead of the week-end business, rearrange the displays around the walls. Check all tools and see that they are in place.

For storing tools marketers recom-

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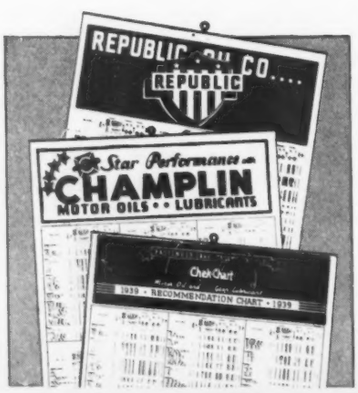

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HEADQUARTERS FOR AUTOMOTIVE INFORMATION

mend a board, with tools held in place on hooks, and outlined in contrasting color. Benches or shelves may be handier, but employes get the habit of tossing the tools after using them. Also, by having a tool board, and replacing tools after use, provides a constant check against any loss.

Constant supervision is the means recommended by marketers for seeing that station operators keep the lubritorium policed. Marketers, however, point out that some judgment is necessary, as too much policing in certain types of stations may result in lost business, such as stations catering to farm trade where the customers feel out of place in a too spic and span station. In such cases marketers make sure by an analysis of the business that good housekeeping will not improve sales, and then forget the station. In stations catering to neighborhood business and to the tourist trade marketers point out that cleanliness and good housekeeping are vital factors.

Where a marketer operates his own stations the marketer himself, or station supervisor, keeps an eye on the housekeeping. Possibly the station manager overlooks the need for cleaning up, such as washing windows, because the poor housekeeping crept up gradually. The supervisor or marketer seeing the station less often notices this housekeeping and reminds the manager to police the station.

Where the marketer leases his stations, or is handling dealers, there is a tendency to keep away from outright supervision or any semblance of giving the operator a direct order to clean up. The approach recommended by marketers is to bring out an obvious point that hits the operator's pocketbook, that slovenly housekeeping results in loss or theft of tools and that, by constantly policing the lubritorium, the expense of replacing tools will be avoided.

Inspection Forms Are Housekeeping Aid

The following inspection forms for lubritoriums are a part of NATIONAL PETROLEUM NEWS complete Service Stations Inspection forms. They cover only the housekeeping in the lubricating department and the scoring system provides a means for comparing different lubritoriums on the basis of their cleanliness, or the same lubritorium at different times. The complete Service Station Inspection booklets are available through NATIONAL PETROLEUM NEWS.

LUBRITORIUM (excluding lifts)	Yes	No
Have grease and oil spots and stains been removed from lubritorium floor?	☐	☐
Is floor cleared of empty cans, tools, waste paper or dirty rags?	☐	☐
Are hi-boys freshly painted and clean?	☐	☐
Are hi-boys neatly arranged and readily accessible?	☐	☐
Is canned oil neatly arranged and readily accessible?	☐	☐
Is repair bench cleaned off when not in used and are tools arranged in an orderly manner?	☐	☐
Is there a rack for repair tools?	☐	☐
Is lubritorium supplied with the correct number of grease guns for specialized lubrication, including guns for universal joints, steering gear, wheel bearings, water pumps, chassis, and a suction gun and oil gun?	☐	☐

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To the buyers of quality Motor Oils who desire a source of supply that can furnish them material which will command leadership at competitive prices.

We ask that before purchasing, you will allow us to present our contract and spot offerings—both on blended oils of any specifications as well as Bright Stocks, Neutral Oils and high flash Cylinder Stocks.

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GOOD HOUSEKEEPING FOR LUBRITORIUMS

	Yes	No
Are control valves and swivel joints of grease guns in good condition, with no lubricant leaks?	☐	☐
Is a grease gun rack provided, and is it used and kept clean?	☐	☐
Are nozzle valves on hi-boy pumps free from leaks?	☐	☐
Is packing on the crank or operating lever of hi-boy pump in good condition, showing no signs of wear?	☐	☐
Are hi-boy pipe joints free from leaks?	☐	☐
Are hi-boy tank seams free from leaks?	☐	☐
Are hose connections and nozzles of grease containers free from leaks?	☐	☐
Do grease containers deliver a full stroke measure? (Check with pint or quart container)	☐	☐
Are quick couplers used to connect air hose to air-operated greasing equipment in good condition, showing no signs of leaks or of being damaged?	☐	☐
Are car charts used by attendant in lubricating cars?	☐	☐
If portable grease container cabinets are used, do they roll easily?	☐	☐
Is a convenient space provided for grease container cabinets?	☐	☐
Are surfaces of grease container cabinets in good condition, not chipped, broken or dented?	☐	☐

	Yes	No
Is a service stand provided for the convenience of attendant in keeping a record of current jobs, and is it conveniently located?	☐	☐
Are grease containers and guns kept filled with proper lubricants?	☐	☐
Is crankcase drain tank clean?	☐	☐
Is crankcase drain tank free from leaks?	☐	☐
If tire rack is provided, are its fastenings and supports tightly connected and solid?	☐	☐
If a lubrication pit is used, is it clear of oil, grease, rags or other rubbish in the bottom?	☐	☐
Are non-skid treads provided on steps leading to bottom of lubrication pit?	☐	☐
If pit is outside, is it covered or roped off at night?	☐	☐

NOTES .....

.....

.....

Lubritorium Score

Total questions asked 29

Total "Yes" .....

$$\text{Score} = \frac{\text{Total "Yes"} \times 100}{29} = \ldots\ldots\ \%$$

LIFTS

If lift is fitted with an oil plug on top, is the plug removed every week and level of oil

SOUTHPORT PETROLEUM COMPANY

REFINERS of the famous HIOTANE GASOLINES

SPECIALIZING in the manufacture and distribution of HIGH OCTANE MOTOR GASOLINE (leaded and unleaded) in the Southeastern States of the U. S.

ATTENTION DEALERS IN THE SOUTHEASTERN STATES

Jobbers and Distributors in Texas, Louisiana, Alabama, Mississippi, Georgia, Florida, Tennessee, North and South Carolina

We are producing a remarkable line of HIGH OCTANE UNLEADED GASOLINE up to 75 OCTANE and LEADED GASOLINE up to 80 OCTANE with which our distributors and jobbers are having remarkable success.

We can also furnish your requirements in OCTANE TRACTOR FUEL (up to 65 octane), KEROSENE, DIESEL OILS, HEATING and LUBRICATING OILS.

Address inquiries to: SOUTHPORT PETROLEUM COMPANY, New Orleans, La., U. S. A.

ATTENTION FOREIGN BUYERS

We specialize in HIGH OCTANE UNLEADED MOTOR and AVIATION GASOLINES, HIGH DIESEL INDEX GAS OILS (up to 65 D. I.), KEROSENE and HEAVY DIESEL FUELS.

Address: Cargo Sales Office, SOUTHPORT PETROLEUM COMPANY, 305 Sterling Building, Houston, Texas, U. S. A.

REFINERIES:
Texas City, Texas, U. S. A.
Kilgore, Texas, U. S. A.

OCEAN TERMINALS:
Texas City, Texas, U. S. A.
New Orleans, La., U. S. A.

GOOD HOUSEKEEPING FOR LUBRITORIUMS

	Yes	No
checked? (Should be filled with a light oil to the point indicated, or to within 6 or 8 inches of the top, and should be maintained at this level at all times)	☐	☐
Is oil and grease wiped off platform immediately after each job?	☐	☐
Is lift equipped with an auxiliary jack attachment to lift body weight off springs and shackles?	☐	☐
Are hinge pins of lift ramps in good condition?	☐	☐
When full air pressure is on, is the base of the plunger free from oil leaks?	☐	☐
When lift is raised, is there only a moderate amount of oil on the plunger?	☐	☐
Have oil leaks been eliminated through the gland bolt holes and outer rim of gland flange? (A leak at these points usually indicates a casing gasket needs replacing)	☐	☐
Is head of lift quiet when it is raised? (A sizzling sound here probably means that fill gasket on top of plunger needs replacing)	☐	☐
Is free wheel lift equipped with latest type front and rear axle supports to accommodate new cars?	☐	☐
When lift is down is the oil level up to the gauge mark in the power unit reservoir?	☐	☐
Will lift raise in 30 to 40 seconds?	☐	☐

	Yes	No
Are fittings and pipe unions free from leaks?	☐	☐
Is oil reservoir free from leaks?	☐	☐
If electrically operated, are motor brushes and commutator free from dirt?	☐	☐
Have electric motor bearings been lubricated in the last 6 months?	☐	☐
Has bottom of oil reservoir been pumped out to eliminate any accumulated water? ...	☐	☐
Is every bolt on the lift tight?	☐	☐
Is each lift equipped with at least 2 stop blocks?	☐	☐
Is lift piston in alignment?	☐	☐
Are runways free from deflection under weight of average car?	☐	☐
Does lift rotate freely, if not equipped with non-rotating device?	☐	☐
If a grease fitting is provided in the top ring of the packing gland, is it lubricated once a month with a water pump lubricant?	☐	☐

NOTES .....

.....

Lift Score

Total questions asked 22

Total "Yes" .....

$$\text{Score} = \frac{\text{Total "Yes"} \times 100}{22} = \ldots\ldots\ \%$$

Definite Savings Assured . . . Through Lower Delivery Costs!

GOODALL GASOLINE TRUCK UNLOADING HOSE

SOFT TYPE

Style D-102 Synplastic Tube...
Style D-103 Compounded Tube...

These are the new flexible, lightweight constructions now extensively used. Made without spiral reinforcing wire, but with new stranded wire built into wall to carry off static electricity.

HARD TYPE—*"Newtype Cord"* WIRE CONSTRUCTION

Style R-23 Synplastic Tube . . .
Style R-10 Compounded Tube . . .

"Newtype Cord" has specially tempered spiral wire woven into carcass under exclusive patents. Hose can be quickly straightened into usable condition after being crushed flat. Light, flexible, easy to handle.

The Synplastic Tube in GOODALL Hose is proof against tube swelling and insures a *full flow* during entire life of hose. The special GOODALL *interlocking* construction of tube, wall and cover prevents separation or unravelling. All types furnished in sizes from 1½" to 4", maximum lengths of 50 feet. Contact nearest branch office for details and prices.

GOODALL RUBBER COMPANY
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New York ● Chicago ● Pittsburgh ● Cleveland ● Houston

GOODALL RUBBER CO. of CALIF.
San Francisco ● Los Angeles ● Seattle
Salt Lake City ● Phoenix

Co-operation For Profits Theme of Dealer Programs

WHERE does a lubrication merchandising program fit into the picture of the oil marketing company supplying lessee or independent retail outlets which are not subject to actual physical control in the maintenance of complete and uniform selling efforts, service procedure, and general station upkeep.

In the face of modern competitive conditions suppliers, large and small, have been forced to recognize the importance of co-operating with dealers in a campaign to boost the overall profit of service station operation. This has been accomplished in many ways by the progressive marketers, but in sum and substance the purpose is to show dealers the extra revenue possible by furnishing customers not only with gasoline, but also with other products and services required by their cars.

Balanced selling in all departments is revealed as the keynote of successful service station operation, and a lubrication department manned with trained operators, using proper equipment and versed in a planned selling program, backed up by marketing company advertising, has been made the cornerstone of a firm foundation for more dealer profits by several Pacific Coast companies working hand in hand with resale accounts.

Soon after some of these supplying companies divested themselves of actual station control or supervision—about a year and a half ago—a general let-down was observed in the overall operations. There were exceptions, of course, but there was a noticeable tendency for the dealer to become lax in merchandising and follow-up, to wear his uniforms an extra day or two, to cut down on product stocks, not to buy needed equipment and to overlook much of the detail work in connection with station records and housekeeping.

What to do about it. Obviously, without actual control, these conditions could not be corrected by orders out of the "head" office. Then too, the supplying companies had found from past experience that dictated rules and procedure were not nearly as effective in gaining dealer co-operation as a specific plan aimed at showing the dealer how his profits could be increased by following recognized good practices in station operation and management.

For the most part this education plan has been centered around the lubrication department, because it is here that the dealer finds his greatest source of extra profits—in the return on labor—and also because the "lift," "rack" or "pit" offers the super contact point for selling the motorist on tires, tubes, spark plugs, oil filters, and other accessory needs. Services performed to the satisfaction of the customer in the lubritorium have also been demonstrated as extremely valuable in building confidence and assuring the return of repeat business.

The Associated Division of Tide Water Associated Oil Co. on the Pacific Coast has followed through on such a program to the point where results are definitely productive; that is, if a

THIS ISN'T MY KIND OF GAS
BUT THEY HAVE MY KIND OF REST ROOMS
So this station got the business!
Sani-Flush
CLEANS AUTO RADIATORS REMOVES RUST
Sani-Flush
For Cleaning Toilet Bowls
QUICK EASY SANITARY
CLEANS WITHOUT FUSS OR MESS

KEEP toilets sparkling-clean—the way women do at home. You don't have to scrub and scour. Just sprinkle a little Sani-Flush in the bowl. (Follow directions on the can.) Flush the toilet—and the job is done. Porcelain sparkles like new. Stains and incrustations vanish. Sani-Flush even cleans the hidden trap. It cannot injure plumbing connected with the bowl. (Clean out automobile radiators with Sani-Flush. Directions on the can.) Sold by grocery and hardware stores—25c and 10c sizes. Also in economical 25-lb. pails. Write for details. The Hygienic Products Company, Canton, O.

boost in chassis lubrication services of from about 80 or 90 a month to up around 150 or 200 a month and a corresponding increase in other services and products at a station adopting the plan can be called productive.

Sales promotion work among its dealers is not new to Associated, but in recent years has developed along lines designed to make each reseller a definite link in the merchandising system by enabling him to qualify as a one-stop depot for products and services stressed by the company in its advertising.

In 1936 the program was called "Planned Selling" with particular emphasis on educating the dealer in a merchandising campaign on lubrication and allied services. During 1937 this program was broadened to include a "Factory Specified" campaign, in which dealers were shown the importance of periodic lubrication and the motoring public was impressed—through advertising and station merchandising—that Associated stations were equipped to take care of the automobile as the factory specified.

The 1938 plan to enlist dealer interest and co-operation was three-fold, including (1) Associated Mileage Service, (2) Factory Specified Lubrication, and (3) Veedol Complete Lubrication, and so arranged that every dealer could come under at least one classification and could, as his business grew, qualify for the more complete service standards.

Mileage Service is the Number One position and it is hope of every dealer to obtain a franchise which will entitle him to display a placque showing he is equipped to render this complete lubrication and allied services. Dealers are franchised once a year and are checked at various times throughout the year for compliance with the established standards.

To qualify for this classification, the station must carry Ethyl and regular grades of gasoline, three grades each of the first and second line motor oils, flushing oil, penetrating oil, S.A.E. 70 motor oil (for overdrives and one-shot lubrication systems), two grades of e.p. lubricants, or one mineral gear oil and one e.p. lubricant, a hypoid lubricant, chassis lubricant, wheel bearing and universal lubricants, graphite spring lubricant, water pump grease, brake fluid, and the equipment necessary to dispense these products.

In addition this station must have a gear case flusher, a spring rifle or spray, covered spring lubricating clamp, wheel packer, spark plug and battery tester, a lubrication bar, knee action lift adapter, a set of E-Z outs or combination extractor tool, a drain plug wrench, Hudson clutch wrench, a pump oiler, canned oil spout, one-quart, half-gallon and gallon oil measures, cotter pins, assorted lubrication fittings, portable tool tray, tire dressing and pencil striper, fender, steering wheel, seat and gear-shift lever covers, a full assortment of miscel-

SOLD — INSTALLED — SERVICED — NATION-WIDE

The "OVERHEAD DOOR"

THE DOOR WITH THE MIRACLE WEDGE

for **LUBRITORIUM—BULK PLANTS—WAREHOUSE—HOME GARAGE**

Manufactured by

OVERHEAD DOOR CORPORATION

Hartford City, Indiana, U. S. A.

Create New Customers with Winkle Squeak Eliminator

Create new and satisfied customers by showing them how the Winkle Squeak Eliminator frees "frozen" shackles—locates hidden squeaks and rattles—detects loose or defective parts—guarantees thorough lubrication of all springs, shackles and spindles by removing body weight from auto chassis.

Increase your lubrication business—the Winkle Squeak Eliminator attracts the attention and admiration of your customers with its eye-catching road action.

Save grease and labor—the movement of springs and shackles under actual driving conditions permits ready passage of lubricants to all wearing surfaces with a minimum of time, labor and material.

Sell "tightening-up" jobs and replacement parts. Winkle Squeak Eliminator with its road action shows your customers when chassis and body parts are loose, worn or defective. Let road action speak louder than words.

Proven Features

The Winkle Squeak Eliminator is the result of months of careful study and experiment under the most severe operating conditions. It IS PROVEN!

Automatic Attachment to car — No Wrenches — Wheels or Pedals necessary. This new feature saves four to eight minutes of cumbersome adjustment in application to car.

Adjustable Stroke makes this device adaptable to all makes and conditions of automobiles.

Adjustable Speed gives from ten to twenty-five m.p.h. ROAD ACTION necessary for the detection and location of squeaks and defects. High speed breaks the most stubborn of "frozen" shackles.

Holds Weight of Body off springs. Will raise body four inches and hold it up so that springs may be sprayed while open.

Engineered for Performance — Convenience — Sturdiness and Durability. All-Metal construction of finest materials insures maximum efficiency and minimum wear. Automotive type piston and rings guarantee everlasting satisfaction. Light weight plus large sturdy wheels permit easy movement from lift to lift or to any point under the car.

Patent Pending

WINKLE MANUFACTURING CORP.

1775 BROADWAY -:- NEW YORK, N. Y.

DISTRIBUTORS WANTED — QUAKER CITY OIL

Since 1919

Permit No. 706

Low Prices . . Exceptional Quality

QUAKER CITY 100% Penna. oil sales increased 300 per cent in 1938 (there's a reason). The popularity of this brand is growing by leaps and bounds. Prices are low . . . quality is high. Exclusive territory available. Shipped in one and five quart cans, and drums.

Inquire at once

PENNSYLVANIA PETROLEUM PRODUCTS CO.

1625-27 So. Water St., *Dept. J.* **Philadelphia, Pa.**

QUAKER CITY OIL IS SOLD FROM COAST TO COAST

The Most Modern Service Stations are of

FRAMELESS INSULATED STEEL CONSTRUCTION *with* Porcelain Enamel

The stations with these colorful, clean, streamlined buildings are the ones that get the motorists' business. A few facts about them:

LOWEST MAINTENANCE COST — no painting, no repairs, easiest to clean.

BUILD TO YOUR OWN PLAN — any size, any color design. Send us a rough sketch of your ideas and let us estimate the cost for you.

NO STRUCTURAL FRAMEWORK — hollow steel panels fully insulated at the factory directly support the roof and form smooth, unbroken surface interior walls which will not absorb grease stains.

ALL-WEATHER ERECTION — since only dry construction is necessary, these buildings can be put up in any season, any weather. Many of them are being erected in the largest cities in the country NOW.

●

Frameless Insulated Steel Construction is equally good for the small office building as for the large building with several lubritoriums. The cost varies with the size and design.

Details mailed upon request

THE CINCINNATI MANUFACTURING COMPANY

Sole Manufacturers of "Frameless Insulated Steel Construction"

Gest and Evans Streets **CINCINNATI, OHIO**

laneous tools, a check chart and monthly bulletin service.

The qualifying items do not end here, but in order that the station will be able to use the recommended equipment in merchandising the products, it must have a complete customer record system and selling aids. This includes a record box, cards, date tabs, job sheets, "Thank You" first time post cards, tire and battery service cards, 1000-mile lubrication reminder cards, 1500-2000-mile follow-up reminder cards, quarterly service cards —to advise the motorist of work done on his car in the previous quarter and work now necessary according to the station's records—and hypoid tags—applied to the differential housing to identify the product used.

The operator must also maintain some approved bookkeeping or accounting system, must be in position to give complete tire and battery service and must handle a complete line of the most common automotive accessories.

The Factory Specified plan is primarily designed for the dealer who does not handle the company's gasolines and does not have complete tire, battery and allied services. As far as lubricants, dispensing equipment and lubrication services are concerned, station qualifying for this franchise must conform to the standard set for "Mileage Service" stations.

The "Complete Lubrication" set-up is the same as Factory Specified, except that the account handles Veedol instead of Cycol lubricants.

Company representatives show the dealer how to make the best use of the recently acquired merchandising tools. These instructors and merchandising salesmen point out to the dealer that he should not go under the hood just to look at the oil and water levels, but to see the condition of spark plugs, the fan belt, oil filter, air cleaner, and often to determine whether a lubrication of the chassis is needed.

In cleaning the windshield, they are told they should look for worn out wiper blades and that when they clean the windshield inside they should check the mileage on the door-jamb record plate against the speedometer for a possible lubrication need. The same observation is stressed with respect to batteries and tires, making these courtesy services count as one step nearer a profitable sale.

On the lift the instructor salesmen show the dealer new wrinkles of the lubrication art, how to save waste motion, how proper equipment increases efficiency and permits more work, and constantly stresses the need for thoroughness of procedure as a means of bringing the customer back.

About a year ago Richfield Oil Corp. leased its stations to individual operators and has since been concentrating on a program aimed at impressing these dealers with the need for complete and uniform operation.

The first drive was to get adequate

equipment into the station, so that the operator would be in position to provide the necessary services. Three groupings of lubrication equipment were recommended, ranging from a complete set of hand and power guns, gear oil dispensers, and miscellaneous equipment for the larger stations, to smaller arrangements for stations with less sales volume.

Next on the program was to sell the station management on the need for a complete stock of merchandise, based on a recommended list. A survey showed most dealers tried to get along on as little inventory as possible, and experience of successful operators showed this was not profitable.

In its efforts to build greater dealer profits, Richfield emphasizes "Balanced Selling" and furnishes each operator a sales record book indicating possible sales and profit per customer, the number of customers needed per 1000 gallons of gasoline, and the extra sales profit which this number of customers should mean to the dealer.

The merchandising aim among dealers is to encourage them to keep an even balance in the eight extra profit sales even though the goal as based on gallonage is not attained. It is pointed out that, if a dealer's sales are below these standards, his customers are buying some of their requirements elsewhere. If sales in any one department fall behind, the dealer is urged to find out why, and he is told; "You are losing profits which belong to you."

The sales record provides space for listing the gross "take" on gasoline and eight other products or services, so the dealer can make a day-to-day check throughout the month on whether or not he is doing a balanced selling job. On the page facing this monthly record of daily sales are ten columns in the form of "thermometers," showing number of customers, gasoline gallonage and the respective quotas in each of the eight departments.

Another Richfield dealer help is the Customer Date Book—"A daily reminder to ask for business." This book is designed to help the dealer systematize his follow-up and to eliminate any chance of failing to call for a car on a specified date, or to miss sending a follow-up card when service is due.

Immediately after a lubrication job or service is completed, the dealer determines from the customer's service record card the next date the same service is due again—based on the average number of miles driven per month and the car manufacturer's recommendation. The customer's name is then entered in the book under the indicated date, together with a memorandum as to whether the car should be called for, a follow-up should be sent, or the customer telephoned.

Space is provided for any pertinent information regarding the nature of the follow-up, need for special items

SERVICE UNIFORMS

ARE BECOMING MORE POPULAR EVERY DAY

Why Not Buy The Best!

Security Super Service Uniforms Are Dependable, Carefully Tailored, Popular Priced.

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Vat Dye, Sanforized Shrunk Fabrics in Finest Cotton Twills, Whipcords, Gabardines, also in Wool Fabrics. You can match them in Shirts, Pants, Jackets, Caps, with your trade mark or name embroidered in colors.

Complete Uniform Service, Your Inquiries Invited.

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FOR DEPENDABLE LUBRICATION GUIDES BUY

Lubrichart

ACCURATE-INEXPENSIVE

COMPLETE — Each book contains the necessary diagrams to cover all passenger cars and 90% of all trucks.

INSTRUCTIVE — Contains many pages of important technical information on how to service parts.

LEGIBLE — Proper lubricants for each point confined in individual boxes, eliminating complicated codes.

ACCURATE — Each individual chart checked by the car manufacturer for accuracy.

EXPERIENCE — Seventh year of compiling and issuing manufacturers' specifications in a standard volume.

PRICED REASONABLY — $4.50 per single copy. Write for quantity prices and further details.

THE LUBRICHART CO.
1120 Chester Avenue, CLEVELAND, OHIO
3600 East 7 Street, LONG BEACH, CALIF

BRADFORD OIL REFINING COMPANY

REFINERS OF

Bradford Pennsylvania — Premium Quality LUBRICATING OILS

For the

INDEPENDENT OIL MARKETER

Refiners of the Well Known Double-Range

ALLPEN

Permit No. 10

MOTOR OIL

In Cans and Drums

NO ACID — NO TAR — NO SLUDGE

Sales and Advertising Support

Write us for Information on Exclusive Open Territory

WE ALSO OFFER

High Flash Cylinde · Stocks, Solvent Dewaxed Bright Stocks, Neutrals and a Complete Line of Pennsylvania Blended Oils in Tank Cars, Drums and all Size Cans.

ALLPEN

"Strictly Independent"

100 PURE PENNSYLVANIA OIL

BRADFORD OIL REFINING COMPANY
BRADFORD, PENNSYLVANIA

and service, or any other data which is not included on the service record card. First order of each day's business in the stations where this book is put to its best use is to check the day's follow-up and go after the business.

The date book also fills a long felt want as a place to record build-ups to a sale by solicitation at the pumps, in the service departments or on personal calls. The prospective customer for a new tire, a lubrication service or some accessory item may agree a definite need exists but resists the sales effort on the plea that he is not quite ready or is in a hurry at the moment. Facts concerning this potential sale are recorded in the date book for attention within the next few days, weeks, or possibly months, but a definite reminder that a sale possibility is there.

Richfield has stressed with its dealers that motorists are willing to pay the price for a lubrication service or other work where they can be shown they are getting their money's worth, and that cut price is a reflection on the station, always raising in the customer's mind the question of whether his car will receive proper attention.

Union Oil Co. tells its dealers and service station operators in an illustrated bronchure entitled "Gunning for Friction" that in five states of the Pacific Coast marketing area, there are more than 3,000,000 motor vehicles, 12 per cent of the U. S. total, and that eight per cent of all cars in the world run on highways leading to pumps of these dealers.

Furthermore, they are told the total automotive lubrication business in the company's marketing area, for 1935, was $30,000,000. The dealer is asked if he was satisfied with his share of this potential business and it was pointed out that many of the dealer's gasoline customers go elsewhere for lubrication—"for they get it somewhere," and "that they get it where they believe they receive the most for their money."

A company survey of cars coming into the service station yard indicated only 3 per cent stop at the lubrication rack. In other words, those customers who came in for lubrication service go directly to the rack; they have been previously sold on the company's lubrication service. This is taken as pointing to a definite need to sell lubrication service to increase this per cent.

Answering its own question of, "How long do you have to sell," Union Oil says the survey showed the time spent in the station by customers is as follows: 57% spend three minutes or less, "They want to get gasoline and be on their way. It is a certainty you can't drag them over to the lubrication rack. Therefore give them the fast service and impress them with that," it is suggested.

Approximately 30% of the customers spend from four to six minutes, representing some opportunity to mention lubrication, but 13% stay more than six minutes, according to this survey, and they are the customers on which the station operator is urged to concentrate.

However, before any attempt is made to sell a service, the operator is cautioned to be sure his "house" is in order, that he is ready for business, that "your guns are loaded before you go into action." A clean "lube" rack is declared just as much a part of the operator's merchandising procedure as his verbal sales presentation, because it inspires confidence. A smudge on a customer's coat from grease or oil on the cabinets, work bench, or equipment, is pointed to as a poor souvenir for him to take away.

The operator is urged to use showmanship by pointing out to the customer the extra free services performed and by emphasizing the particular care he took with the car in protecting the car owner's investment.

These are only a few of the west coast marketing companies which have found it profitable to concentrate on lubrication departments in the service stations as a means of boosting the dealer's and company operated station's profit and in securing greater co-operation on all merchandising and operating plans from the independent reseller.

It should be pointed out that the greatest success is where the merchandising programs are consistently stressed, improved and, above all, backed up by advertising which tells the motorist about the special care his car is given at stations handling the supplier's products.

FOR WINTER SALES
feature
FREEDOM
10W and 20W
MOTOR OILS
they're 100% pure Pennsylvania
Here are motor oils refined from nature's finest crude, conditioned for cold-weather driving—10 W and 20 W grades in Beaver-Penn, Fort Pitt, Penn Trump and Four-State, or packed under your own brand name. Now is the time to stock-up for the winter change-over. We're all set to handle your order. If you are not familiar with Freedom quality and Freedom service, write for information today on the exclusive Freedom franchise in your territory.
THE FREEDOM OIL WORKS COMPANY, FREEDOM, PA.
Pacific Coast Bulk Plant and Warehouse: Los Angeles, California
PENN TRUMP
FOUR-STATE
BEAVER PENN
FORT PITT
MOTOR OIL
PENNSYLVANIA

Exempted From "Lube" Oil Tax

WASHINGTON — Internal Revenue Bureau has advised the National Petroleum Assn. that the federal lubricating oil tax does not apply to lubricating oil sold for use in the manufacture of porous bronze bearings or porous pressed steel bearings.

More Money From "Lube" Oil Tax

WASHINGTON — The federal tax of four cents a gallon on lubricating oil will bring in $33,400,000 during the fiscal year beginning July 1, 1939, according to President Roosevelt's recent budget message to Congress. For the current fiscal year ending June 30, 1939, it is estimated "lube" oil tax collections will amount to $29,800,000 which — unless the estimators are wrong one way or another—indicates a sizable increase in lubricating oil sold this year. For the last fiscal year, ended June 30, 1938, collections were $31,565,000.

USE
CHAMPLIN
OILS
The Sign of
GUARANTEED QUALITY
For years the Champlin emblem has been assurance of quality, and it is the answer for the Independent Jobber who desires a reliable refinery connection with conveniently located gasoline terminals and warehouses, plus a complete line of petroleum products.
Keeping abreast of progress, Champlin recently added new and modern facilities for compounding gear lubricants. These new units have pushed Champlin Lubricants and Greases into first place with middle-western jobbers.
Write, wire or phone today for complete information on
CHAMPLIN GASOLINE . . . TRACTOR AND MOTOR OILS . . . GREASES . . . KEROSENE . . . BRIGHT STOCK . . . NEUTRAL OILS . . . TRACTOR FUELS AND DISTILLATE . . .
Gasoline Pipeline terminals at Hutchinson, Kansas and Superior, Nebraska. Warehouses at Lincoln, Omaha, Grand Island and Superior, Nebraska, Mason City, Iowa, Denver, Colorado and Springfield, Missouri.
CHAMPLIN REFINING COMPANY
Enid, Oklahoma

Showing the customer why and how his car is lubricated, and backing the sales talk up with an equipment display, is half the battle in selling lubrication services

More "Lube" Jobs in the Day With Modern Equipment

THE modern lubritorium, with its cleanliness, efficient lift, and streamlined lubrication units that blend into the lubritorium background, set the stage for prospective business.

Modern lubrication equipment, located where it can be seen by driveway customers, breeds customer confidence in the station's ability to do a business like and thorough job.

Being close to the petroleum business himself, the station operator often does not fully consider that there are but few industries where the product sold is seldom seen by the purchaser. Gasoline, motor oils, and lubricants are dispensed from containers, pumps or guns and the carowner seldom sees what he is buying. If he could see it, he would be unable to judge its quality. He must rely on the trade-mark, the identification of the station, the integrity of the operator—and the equipment with which the lubrication work is done.

In the eyes of the average customer, outmoded, inefficient and unkept equipment is a strong argument against the ability of an operator to perform thorough and satisfactory lubrication services and will often offset well planned and concentrated merchandising efforts.

Starting from a small beginning, or from scratch as it did, the business of car lubrication has grown until today it is estimated that motorists spend approximately $66,000,000 per year for this service, including special lubricants and gear lubricants, but not including motor oils.

Important to the station operator, too, is the fact that his profit grosses 50 to 60 per cent on general lubrication and can be made to exceed these amounts by special services possible in the lubritorium. Not to be overlooked also is the opportunity presented the operator for making sales of other products and accessories to a customer whose car is actually on the lift.

The modern lubritorium finds the lift as necessary as a bride on a honeymoon. In fact an increasing number of stations are being studied to determine the profit possibilities in adding a second, and in some cases a third, lift. (At this point, of course, the analogy of the bride becomes inoperative.)

One oil company has found that 150 lubrication jobs per month are about all that one lift can conveniently handle and that, when a station hit this output consistently, an additional lift is a profitable investment.

No half dozen experts will agree on the amount of new business to be expected by the addition of a second lift. However, in the experience of some oil companies who put in a second lift when their output of jobs exceeded the capacity of original facilities, the boost in the total number of jobs is upward of 25 per cent. That is, on the basis of 150 jobs to warrant the addition, a second lift should account for at least 35 new services a month.

For the merchandiser who is on his toes, every one of these new jobs should mean not less than $2 in gross profit, exclusive of motor oil sales, but including such extra profit services as transmission and differential changes and flushes, front wheel bearing lubrication, cleaning air filters, covered spring repacking and so on, or a total additional profit of $70 a month, which would add up to the cost of a new lift in short order.

All that has been said about the advantages of adequate lift capacity can be applied to other equipment found in the modern lubritorium. No one questions the fact that a hand-operated gun will serve in most lubrication work, but where time spent per job is an important factor, the advantages of power equipment often represent the difference between profit and loss.

If the time required to perform any lubrication service, from a chassis job to a spring pack, can be cut in half, or even reduced a third, it takes no economist to figure the "cold fact" earning ability of efficient equipment, and this is aside from the selling aid offered by a clean and attractive display of the equipment itself.

In this analysis of modern equipment, its ability to do a better job in less time, and its use in SELLING the

customer, it might be well if we stepped into the lubritorium of a station where the profits on lubrication and allied services and sales represent at least 50 per cent of the total revenue.

From the air compressor right down through a complete assortment of air-powered pressure guns and grease dispensers to the various pieces of accessory equipment used in performing extra profit lubrication and allied services, we find a definite trend toward compactness, high capacity output, a minimum of wearing parts, and an overall streamlining of enameled surfaces in furthering the merchandising appeal of this equipment.

If preconstruction analysis of a station's potential business indicates two or more lifts will be required eventually, sufficient air compressor capacity should be provided in the original installation to take care of this indicated capacity. The rule is rather generally adopted that two-stage equipment should be used with two lifts and air-powered pressure equipment where a maximum working pressure in excess of 150 pounds is required.

We are likely to find a high pressure portable chassis lubricating unit if the station is turning out upward of 100 jobs a month and probably an integral unit capable of handling whole drums of lubricant and equipped with a central grease pump which supplies the pressure for two or more guns, if the job output is from two lifts and exceeds 175 a month.

The hand operated gear oil dispenser is also on the way out, except in some recent equipment designed to handle hypoid lubricants, and improvements in design of power-operated units have solved the problem of air elimination in the metered delivery.

Where the station operator is out to net every profit possible on his lubrication services, we will find an efficient gear flusher for cleaning out crankcases, transmissions and differentials—an important service and easy to sell the owner of a modern car. Experience has indicated even the most expensive of this equipment will pay out within a few months. A charge of $1 for crankcases and 75 cents for the combination transmission and differential flush pays large dividends.

In addition to this equipment, the station will have special guns and facilities for packing spring covers and front wheel bearings, for servicing universal joints, water pump bearings, shock absorbers, air cleaners and so on.

Operating department heads of many marketing companies are experimenting with special-use equipment, such as gear flushers, wheel-bearing packers, air filter cleaners, hypoid dispensers and the like. One California company recently recommended the use of a flusher as the result of an exhaustive study covering six months

THE BIRTH of the OIL INDUSTRY

By

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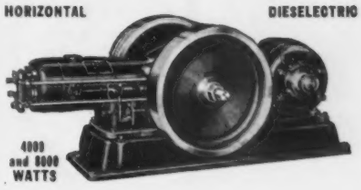

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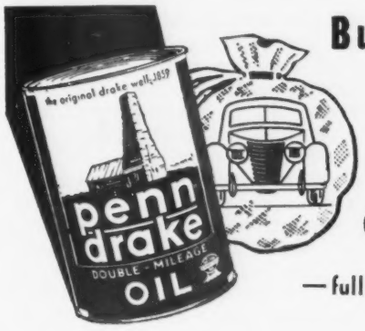

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Warren, Pennsylvania, U. S. A.

and has installed 300 units at retail outlets.

Following successful tests with a device for cleaning air filters, an eastern company recently stressed the profits possible in this service and recommended use of the equipment by its resellers, which number around 700.

As an aid to selling wheel-bearing lubrication services, numerous companies have found an attractive display containing a bearing packer and cleaning equipment offsets the argument that the service station is not equipped to perform this service.

Oil companies are also recommending groups of lubrication equipment designed for good display and efficient operation in stations of various size, with the possibility of adding units to the smaller groups as business increases.

Whether they are separate units, or assembled together under a single impressive housing, the central theme is one of showmanship and display in which customer confidence is strengthened and repeat business is assured.

Modern equipment arranged to make a clean and attractive display and featuring multi-lift capacity, is the foundation upon which car dealers have made a determined and usually successful bid for the new car lubrication business.

The average owner of a new car has just made one of the largest single investments of his life. This latest model is shiny, sleek and full of power and, for the first year at least will be given considerable attention. The car dealer found that an impressive lubritorium with lots of gadgets, dials and enameled housings went more than half way in selling the idea that here the customer's car was in expert hands and that periodic service would prolong its life.

Profit from chassis lubrication is not the reason for this showmanship—although the trend among car dealers appears away from cut-rate "lube" jobs. These dealers make a play on lubrication because they found it was the "fountain head" for other profitable sales, including automotive repairs and upkeep.

If the service station operator is going to compete with the car dealer for this new car lubricating business, he must be able to put on the same convincing sales talk—backed up by modern, efficient equipment—and demonstrate that his service is more thorough, including many courtesy services not offered by the car dealer, and generally more convenient.

The service station operator has at least three opportunities a week to contact the average car owner, compared to not over one month offered the car dealer. Many operators have found a good entering wedge in talking up their lubrication service is to take some feature about the car that needs particular attention, such as the battery, water pump, universal, automatic clutch control, front wheel bearings.

Wherever possible successful lubrication job merchandisers try to get the car owner to watch the lubrication service as it is performed, whether it is a chassis job or one of the special services. Experience has proved this a good means for bringing the customer back; but it requires clean, modern equipment, floors, workbenches, and a general workmanlike approach to the lubrication procedure.

A special dispenser, with pump and meter, designed by Union Oil Co. for hypoid lubricants

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New Equipment

AND THE MANUFACTURERS

SALES REORGANIZATION — The United States Air Compressor Co. of Cleveland has announced the following changes in its sales organization:

R. P. Summers, district manager in Chicago area for five years, effective Jan. 1, became sales manager of the Southwest Pump Co. with headquarters at Bonham, Texas.

E. W. Bettis, for ten years Ohio district manager, has been transferred to Chicago, succeeding Summers as district manager of that territory.

D. E. Pratt, formerly district manager for the company in Indiana, Michigan and Illinois, is being transferred to Texas.

District management of the company's activities in Louisiana, Mississippi and western Tennessee goes to H. W. Martin of New Orleans.

* * *

IMPROVED FOUR-POST LIFT—Curtis Pneumatic Machinery Co., St. Louis, has announced a new four-post electric lift offering several features of interest to service men. Cross beams, chains or other overhead obstructions have been eliminated—permitting a car to be driven on or off either end.

No excavation, special foundations, nor even floor sockets are needed, and

it can be installed outdoors, or on any type of wood, composition or concrete floor, according to the company. Other features include automatic, double safety devices at each corner, helical-cut driving gears, flexible couplings and a self-locking, Timken-bearing-equipped worm gear drive running in oil, to reduce friction and give greater efficiency and longer life.

* * *

NEW EMERGENCY VALVES — Fundamental departures from conventional design is claimed for a new line of emergency valves, being manufactured by A. Y. McDonald Mfg. Co., Dubuque, Ia.

The line includes two types for storage tanks: One furnished with a simple but positive hold-open arrangement—a fusible link insures closing in case of a fire—and a second type, without the hold-open device, which may be operated by a cable with one or more fusible links for automatic closing of the valve in case of fire.

The company has also announced three new model valves especially designed for truck tanks to give any desired control arrangement, adjustment for varioius size compartments and provisions for full flow.

A new edition of the company's catalog is also announced.

* * *

DOOR SAFETY DEVICE — Designed to eliminate possible injury to persons or cars from carelessly closed upward-acting doors, an automatic safety control has recently been announced by Kinnear Manufacturing Co., Columbus, Ohio. The device reverses action of the door if it hits an obstacle.

* * *

"FACT BOOK" ON TUBING—A new book on flexible metal hose and tubing has been published by the Flexible Metal Hose & Tubing Institute, 150 Broadway, New York. Containing photographs of actual uses and installations, this booklet also lists principal types and forms, for the information of design engineers and other users.

* * *

MULTIPLE PASSAGE HOSE—Patents have been obtained by Hewitt Rubber Corp., Buffalo, on its Twinweld Welding Hose, which features two lines of flexible, cord-reinforced welding hose, joined into a single unit by a molding process at a 290° temperature. It is claimed the new hose will not writhe or twist under pressure, because a differential of pressure in one line has no effect on its companion line.

* * *

NEW COMPRESSOR — Especially designed for the automotive service industry, a new streamlined air compressor is announced by the Quincy Compressor Co. of Quincy, Ill. The units are finished in a durable, "soft green, art metal" finish, with grilles, trim and intercooler a natural copper color for pleasing harmony. Requiring much less floor space, the new units are available in sizes ranging from 1 to 3 horsepower inclusive, with piston displacement from 5 to 13 cubic feet per minute.

* * *

RUBBER LUBRICANTS — A survey made by Acheson Colloids Corp. showed that practically every rubber part on the modern automobile requires some degree of lubrication, including such items as spring shackles, sway eliminator bars, steering columns, shock absorber arms, spring pads, fan belts, mountings, silence strips and bushings. Growing popularity of colloidal graphited preparations for the purpose was indicated.

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GREEN GN *(bright emerald shade)*	ORANGE GY *(yellowish orange shade)*
BLUE *(deep sky shade)*	ORANGE GR *(deep orange shade)*
RED *(scarlet shade)*	BRONZE ORANGE R *(bronze orange shade)*
RED B *(bluish rose shade)*	AMBER Y *(amber shade)*
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PURPLE R *(bright purple shade)*	YELLOW N *(lemon shade)*

BLACK B *(deep black shade)*

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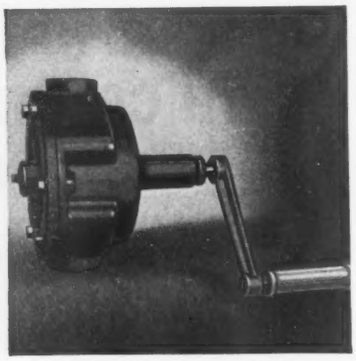

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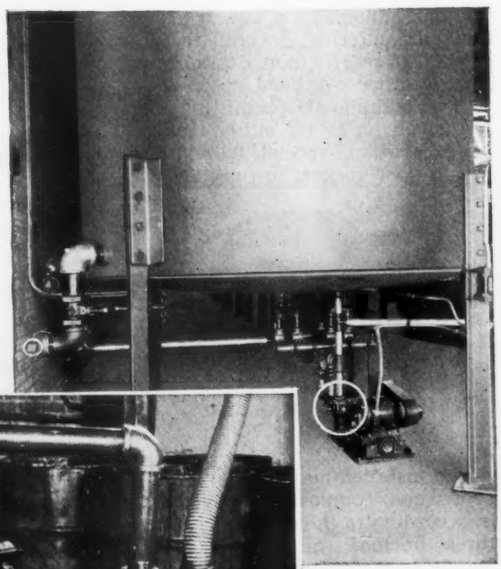
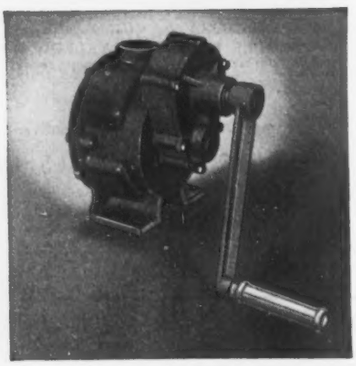
BELOW—Inexpensive, rotary pump for barrel dispensing of all types.

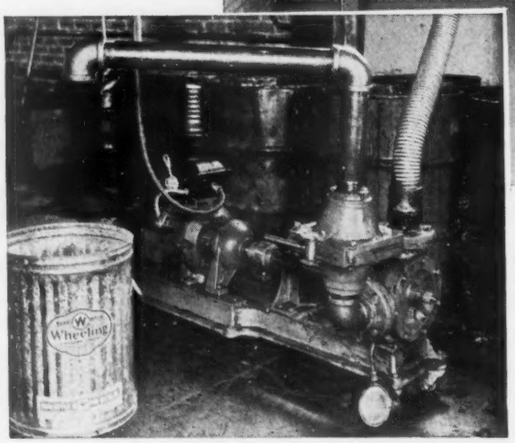
RIGHT — Picture shows Viking Rotary Pump used for canning leading brand of lubricating oil.



LEFT — Kwart-Kwick Barrel pump —fits any standard steel drum — priced amazingly low.



ABOVE — Back-Geared Viking Barrel Pump.



LEFT — Another Viking Rotary Pump used for filling grease containers.

VIKING PUMP CO.
Cedar Falls, Iowa

Markets

Pennsylvania

CLEVELAND, Jan. 16. — Lower prices were reported for gasoline and fuel oil in the upper western Pennsylvania market last week. Aside from one five-car sale of 36-40 fuel oil, however, no open spot sales were reported, either of light products or lubricating oils.

There was practically no open spot market trading with jobbers in tank car lots of ordinary U. S. Motor gasoline in the upper Pennsylvania field, according to reports from that district. Most of the trading was in tank truck lots, sellers said. Such tank car business as there is now, they said, was inter-refinery. No jobber prices were reported for U. S. Motor in tank cars.

One upper field supplier reported offering 65, 70 and 74 octane gasolines at prices 0.75 cent lower than those which other sellers said they were quoting. Quotations reported for the first two grades ranged from 5.5 to 6.75 cents and 5.75 to 6.5 cents, respectively. The one supplier reported quoting 6.25 cents for 74 octane.

No changes were reported in quotations for lubricating oils or for light products in the lower Pennsylvania district.

Mid-Western

CHICAGO, Jan. 16. — Offerings of low octane gasoline in the open spot market were reported freer by most marketers last week. One tank car marketer reported reducing his quotation on 62 octane and below 0.125 cent to 3.125 cents. A refiner reported reducing his quotation on 70-72 octane gasoline 0.125 cent to 4.625 cents. There was also an unconfirmed report of a 25-car sale of "Q" gasoline in the open spot market at 3.875 cents. Quotations reported for 70-72 octane gasoline ranged from 4 to 4.625 cents.

A Michigan refiner reported advancing his quotation on straight run gasoline 0.25 cent to 3.75 cents; other quotations reported for this grade ranged up to 4.5 cents.

Little change was reported in kerosine either in the Chicago area or in Michigan.

Mid-Continent

TULSA, Jan. 16.—Reductions of 0.5 to 0.75 cent were reported last week in Grade 26-70 natural gasoline quotations when, traders said, deliveries failed to return to pre-holiday volume. While offerings by individual suppliers were said to be small, the aggregate was sufficient to "throw the market off balance," it was said. Open spot sales during the week totaled 22 cars, f.o.b. group 3; 13 cars, f.o.b. Breckenridge.

Reductions in refined gasoline quotations also were reported by some Mid-Continent refiners. In most cases the lower quotations came within the price ranges reported the previous week. In North Texas, however, reduced quotations reported last week brought highs of the price ranges as much as 0.5 cent below those of previous week. North Texas 60-62, 400 e.p. gasoline quotations were reported at 3.625 to 4 cents, 0.375 cent below previous week.

Quotations for Oklahoma 42-44 w.w. kerosine reported last week ranged from 4 to 4.625 cents, down 0.125 cent on the low.

Buyers reported Mid-Continent 124-126 wax was increasingly difficult to obtain for immediate shipment.

Gulf

NEW YORK, Jan. 16.—Conditions in the Gulf cargo market the second week of January duplicated the first week of 1939, with little interest shown by either domestic or foreign buyers, and with prices unchanged, according to reports.

Foreign buyers especially were inactive, with no reports of even a "market feeler" heard. No open spot market cargo sales for export were reported.

Some traders said they felt that the gradual decline in boat rates was, in some measure, responsible for the lack of interest. Foreign bottoms particularly were lower, with owners said to be asking 1/-to 1/6 shillings under the last paid for clean boats for Gulf to U. K. or Continent trades.

Domestic ships also were reported lower in price, with one unconfirmed report Jan. 14 that a charter for kerosine from the Gulf to North of Hatteras had been made at 23 cents, 5 cents under a fixture the first week of January.

Low octane gasolines were reported at a low of 4.375 cents, with low diesel index gas oil and No. 2 fuel at 3.375 cents.

N.P.N. Gasoline Index

	Dealer T.w.	Tank Car
	Cents per gal.	
Jan. 16	9.56	5.39
Month ago	9.62	5.41
Year ago	10.20	5.96

Dealer index is an average of "undivided" dealer prices, ex-tax, in 50 cities.

Tank car index is an estimated average tank car price for gasoline weighted by assigning estimated values for market volume in 12 wholesale markets for regular grade gasoline.

Eastern

NEW YORK, Jan. 16.—Gasoline markets continued without especial feature the second week of January, with some price shading still reported in one or two of the key markets along the eastern seaboard.

This was especially true in Boston and of high octane gasoline in tank cars in the New York harbor market, according to reports of some traders.

Despite widespread reports of high octane gasoline being freely available at 5.75 cents in tank car lots in the New York harbor market, sellers insisted they were holding for a minimum of 6 cents.

Kerosine prices were reported advanced 0.5 cent in the Boston and Providence markets by some sellers about the middle of the week. All sellers, however, did not advance prices, and lows of price ranges remained unchanged.

California

LOS ANGELES, Jan. 14.—All California petroleum markets were quiet the past week, with no changes reported in prices. Although a slight increase was noted in inquiries for cargo shipments, chiefly from oriental interests, no new commitments were reported and offshore movements were generally of a routine nature.

In the domestic market, there were indications of shading of burning oil prices, particularly those for heavy fuel and diesel oils. Contributing factors were said to be the large stocks of smudging oil that ranchers have carried over from last season, the continued mild winter, and the improbability of a long spell of severe cold weather. However, conditions in the ranching areas of the San Joaquin Valley, as well as the Los Angeles Basin, were considered favorable, with an increasing demand for light fuel oil reported at independent Valley plants at $0.85 a barrel. This demand largely offset the decline in the demand for heavy grade oil, selling at $0.75 a barrel.

Fuel Oil

CHICAGO, Jan. 16.—Relatively mild weather the past week continued to hamper movement of all grades of light fuel oil, resellers here said. A refiner reported reducing his light fuel quotations 0.125 cent to 3.75 cents for No. 1 p.w. distillate, 3.625 cents for No. 1 straw, and 3.5 cents for No. 2 straw. A tank car marketer who had been quoting 3.5 cents on No. 3 fuel reported reducing his quotation to 3.375 cents. No other changes in quotations were reported during the week.

Michigan refiners reported a decline of 16,000 barrels in No. 1 p.w. distillate inventories. Quotations reported for

(*Continued on page* 109)

CLASSIFIED

Positions Wanted

MAN 37 YEARS OF AGE with 10 years experience in sales and sales supervision in the marketing end of petroleum products and accessories, desires connection in similar capacity with oil company or accessory manufacturer. Address Box 80, National Petroleum News.

CONNECTION WITH INDEPENDENT jobber or refiner sought by young man with bakground of ten years executive experience in all phases of service station and bulk plant management. Capable of assuming active charge of entire marketing operation. Complete details of record gladly furnished on request.

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TANK CAR SALESMAN desires connection with reputable refiner. Over eight years experience selling oil, gasoline and naphthas to jobbing trade Ohio and Indiana. Good sales record and acquaintance. Write Box 82, National Petroleum News.

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Pure Oil Co. .....

Republic Oil Co. .....
Roper Corp., Geo. D. 77

Shand & Jurs Co. .....
Shell 67
Sinclair Refining Co. 51
Skelly Oil Co. 8-9
Smith Meter Co. 15
Southport Petroleum Co. 90
Southwest Pump Co. .....
Standard Oil Co. of N. J. .....
Standard Steel Works .....
Stewart-Warner Corp. 7
Sun Oil Co. .....

Texaco Development Corp. .....
Tokheim Oil Tank Co. ...Third Cover

U. S. Air Compressor Co. 57
U. S. Rubber Co. 72-73
Universal Oil Products Co. 43

Viking Pump Co. 102

Wayne Pump Co. .....
Wayne Oil Burner Corp. .....
Wheaton Brass Works, A. W. 39
Wheeling Corrugating Co. .....
Wilson & Bennett Mfg. Co. 53
Winkle Mfg. Corp. 93
Witte Engine Works 99

Tennessee Marketers Have Reorganized

MEMPHIS — Oil marketers of Tennessee will gather Jan. 23 at the Peabody Hotel here for a meeting of the Association.

The association was reorganized Oct. 12, when a large group of independent oil marketers, engaged in both jobbing and retailing operations in Tennessee, met in Nashville.

It was decided that qualifications for membership in the organization should be as follows:

"Any person, firm or corporation doing business in Tennessee and purchasing petroleum products for his, or its, own account and resale to dealers or consumers, shall be eligible to membership in the Tennessee Oil Men's Association and the membership shall be limited to those who qualify under this definition."

Dues were fixed on a very nominal basis, inasmuch as the organization expects to carry on by each official contributing his time and efforts, without remuneration.

Objectives of the association were declared to be the reduction of the exorbitant gasoline tax in Tennessee and the fostering of legislation which would protect the industry and the opposing legislation which would regulate or regiment the industry.

Headquarters of the organization are maintained at 507 American National Bank Building, Nashville.

Officers elected by the Tennessee association were: President, Sam H. Campbell, of Chattanooga, Campbell Oil Co.; vice president (representing the middle section of the state), Sam H. Arnold of Fayetteville, Elk Oil Co.; vice president (representing the western section of the state), C. (Ches) E. Davis of Dyersburg, Tennessee Oil Co.; secretary-treasurer, G. B. Dickey of Nashville, American Oil Co. of Tennessee, Inc., and general counsel, A. T. Levine of Nashville.

REFINERY TANK CAR MARKETS

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days) unless otherwise stated. Prices in cents per gallon, except heavy fuel oils in dollars per barrel of 42 gallons, wax and petrolatums in cents per pound in barrels, tank car lots, f.o.b. refineries in districts designated, except where otherwise noted. Inter-refinery and export prices not included unless so stated in the respective markets. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-33T; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Gasoline

Prices Effective	Jan. 16	Jan. 9
OKLAHOMA		
U. S. Motor: (Octane L-3)		
62 oct. & below	3.625– 4.25	3.125– 4.25
63-66 oct.	3.875– 4.50	3.875– 4.50
67-69 oct.	4.125– 4.625	4.125– 4.625
70-72 oct.	4.125– 5.00	4.125– 5.00
60-62, 400 e.p.	3.25 – 3.75	3.25 – 3.75
WESTERN PENNA.		
Bradford-Warren.		
Motor gasoline:		
U.S. Motor (58-62° gravity):	(i)	5.00 – 5.125
Min. 65 oct.	5.50 – 6.75	6.25 – 6.75
Min. 70 oct.	(f) 5.75 – 6.50	(e)6.50
"Q" gasoline	(e&g)6.75	(e&g)6.75
Other districts:		
Motor gasoline:		
U.S. Motor (58-62° gravity):	4.00 – 5.00	4.00 – 5.00
"Q" gasoline	(g) 6.25– 7.00	(g) 6.25– 7.00
CENTRAL MICHIGAN (a)		
8tr.-Run Gasoline	(c) 3.75– 4.50	(c) 3.75– 4.50
U. S. Motor: (Octane L-3)		
67-69 octane	(e)6.75	(e)6.75
70-72 octane	7.25 – 7.75	7.25 – 7.75

Prices Effective	Jan. 16	Jan. 9
CALIFORNIA (3c tax to be added if used in state)		
U. S. Motor:		
54-58 gravity, for in-state shipment	6.75 – 9.25	6.75 – 9.25
54-58 gravity, for out-side state shipment.	6.75 – 9.00	6.75 – 9.00
58-61 gravity, 375-400 e.p., 65 oct. & above	7.75 – 9.75	7.75 – 9.75
N. TEX. (b)		
U. S. Motor: (Octane L-3)		
62 oct. & below	3.625– 4.25	3.625– 4.50
63-66 oct.	4.125– 4.75	4.125– 4.75
67-69 oct.	4.25 – 4.50	4.25 – 5.00
70-72 oct.	4.375– 4.875	4.375– 5.375
60-62, 400 e.p.	3.625	4.00
KANSAS (For Kansas destinations only)		
U. S. Motor: (Octane L-3)		
62 oct. & below	3.875– 5.00	3.875– 5.00
67-69 octane	(h) 4.25 –5.50	(h) 4.25 –5.50
70-72 oct	4.625– 5.875	4.625– 5.875
W. TEX. (b)		
U. S. Motor: (Octane L-3)		
62 oct. & below	3.75 – 4.50	3.75 – 4.50
63-66 oct.	4.125– 4.75	4.125– 4.75
67-69 oct.	4.375– 5.125	4.375– 5.125
70-72 oct.	4.625– 5.00	4.625– 5.00

Prices Effective	Jan. 16	Jan. 9
CENTRAL WEST TEXAS (Prices to truck transports)		
U. S. Motor Gasoline: (Octane L-3)		
62 oct. & below	(h) 4.00– 4.25	(h) 4.125–4.25
63-66 octane	(e)4.75	(e)4.875
66-70 octane	(e)5.50	(e)5.50
E. TEX.		
U. S. Motor Gasoline: (Octane L-3)		
67-69 oct.	(e)4.25	.....
70-72 oct.	(e)4.50	.....
60 62 400 e.p.	3.75 – 4.00	(f)4.00
N. LA (For shipment to La. & Ark.)		
U. S. Motor: (Octane L-3)		
62 oct. & below	4.125– 4.375	4.125– 4.375
63-66 oct.	(e) 4.375–4.625	(e) 4.375–4.625
67-69 oct.	(e) 4.625–4.875	(e) 4.625–4.875
70-72 oct.	4.875– 5.375	4.875– 5.375
ARKANSAS (F.o.b. Ark. plant of one refiner, for shipment to Ark. & La.)		
U. S. Motor: (Octane L-3)		
62 octane & below	4.00	4.00
67-69 oct.	5.125	5.125
OHIO (S. O. Ohio quotations for statewide delivery and subject to exceptions for local price disturbances)		
U. S. Motor	7.25	7.25
Above 65 oct.	7.50	7.50

Continued on next page

(a) Prices f.o.b. Central Michigan refinery group basis, for shipment within Mich. Shipments may originate at plants outside Central group. (b) For shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments. (c) Excluding Detroit shipment. (d) Nominal. (e) One refiner quoting. (f) Two suppliers quoting. (g) To resellers holding licenses. (h) Two refiners quoting. (i) No quotations reported.

MID-WESTERN TANK CAR MARKET

Prices in this Midwestern Tank Car Market table are gathered from refiners and tank car marketers or brokers from their offices located in Chicago and the surrounding territory. While the prices are quoted on a Group 3 (Oklahoma) freight rate basis, this is in accordance with the custom of the oil industry which uses Group 3 as a price basis for the ease of comparing prices even when the material originates in another refining district. Generally when prices are quoted in this Chicago market, the origin of the material is not known at the time the quotation is given, oftentimes even with the quoting refiners who have refineries in more than one refining district. All other gasoline prices are given by and for the particular refining district where the material is made and from which it is shipped.

Gasoline

Prices Effective	Jan. 16	Jan. 9
U. S. Motor: (Octane L-3)		
62 oct. and below	3.125– 4.00	3.25 – 4.00
63-66 oct.	3.625– 4.50	3.625– 4.50
67-69 oct.	3.75 – 4.50	3.75 – 4.50
70-72 oct.	4.00 – 4.625	4.00 – 4.75

Kerosine

41-43 gravity, w.w.	3.75 – 4.125	3.75 – 4.125
42-44 gravity, w.w.	3.75 – 4.375	3.75 – 4.375

(a) Nominal.

Fuel and Gas Oils

Prices Effective	Jan. 16	Jan.
No. 1 p.w.	3.50 – 3.875	3.50 – 3.875
No. 1 straw	3.50 – 3.625	3.50 – 3.75
No. 2 straw	3.375– 3.625	3.375– 3.625
No. 3	3.125– 3.375	3.125– 3.50
No. 5	(a) $0.60–$0.70	(a) $0.60–$0.70

Prices Effective	Jan. 16	Jan. 9
No. 6	(a) $0.30–$0.45	(a) $0.30–$0 45
U G. I. gas oil	(a) 2.625–2.875	(a) 2.625– 3.00
Range oil	3.50 – 4.00	3.625– 4.00

Naphtha and Solvent

Stoddard solvent	5.875	5.875
Cleaners' naphtha	6.375	6.375
V. M. & P. naphtha	6.375	6.375
Mineral spirits	5.375	5.375
Rubber solvent	6.375	6.375
Lacquer diluent	7.375	7.375

Daily range of gasoline prices as reported in PLATT'S OILGRAM (Week Ended Jan. 13, 1939)

U. S. Motor, (Octane Number determined according to L-3 Method in Okla., Texas and Mid-Western Districts):	Jan. 9	Jan. 10	Jan. 11	Jan. 12	Jan. 13
62 octane and below:					
Oklahoma	3.125– 4.25	3.125– 4.25	3.125– 4.25	3.125– 4.25	3.125– 4.25
(b) North Texas	3.625– 4.50	3.625– 4.25	3.625– 4.25	3.625– 4.25	3.625– 4.25
West Texas	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50
Mid-Western (Group 3 basis)	3.25 – 4.00	3.25 – 4.00	3.25 – 4.00	3.125– 4.00	3.25 – 4.00
63-66 octane:					
Oklahoma	3.875– 4.50	3.875– 4.50	3.875– 4.50	3.875– 4.50	3.875– 4.50
(b) North Texas	4.125– 4.75	4.125– 4.75	4.125– 4.75	4.125– 4.75	4.125– 4.75
West Texas	4.125– 4.75	4.125– 4.75	4.125– 4.75	4.125– 4.75	4.125– 4.75
Mid-Western (Group 3 basis)	3.625– 4.50	3.625– 4.50	3.625– 4.50	3.625– 4.50	3.625– 4.50
67-69 octane:					
Oklahoma	4.125– 4.625	4.125– 4.625	4.125– 4.625	4.125– 4.625	4.125– 4.625
(b) North Texas	4.25 – 5.00	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
West Texas	4.375– 5.125	4.375– 5.125	4.375– 5.125	4.375– 5.125	4.375– 5.125
Mid-Western (Group 3 basis)	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50
70-72 octane:					
Oklahoma	4.125– 5.00	4.125– 5.00	4.125– 5.00	4.125– 5.00	4.125– 5.00
(b) North Texas	4.375– 5.375	4.375– 4.875	4.375– 4.875	4.375– 4.875	4.375– 4.875
West Texas	4.625– 5.00	4.625– 5.00	4.625– 5.00	4.625– 5.00	4.625– 5.00
Mid-Western (Group 3 basis)	4.00 – 4.75	4.00 – 4.75	4.00 – 4.625	4.00 – 4.625	4.00 – 4.75
Motor Gasoline, 60-64 octane:					
New York harbor	(a)6.00– 6.25	(a) 6.00– 6.25	(a) 6.00– 6.25	(a) 6.00– 6.25	(a) 6.00– 6.25
Philadelphia district	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50
Baltimore district	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50
Motor Gasoline, 65 octane & above:					
New York harbor	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50
Philadelphia district	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50
Baltimore district	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50	(a) 6.00– 6.50
U. S. Motor, 58-62°:					
Bradford-Warren (Western Penna.)	5.00 – 5.125	(e)	(e)	(e)	(e)
Other districts (Western Penna.)	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00
Motor Gasoline, Min. 65 octane:					
Bradford-Warren (Western Penna.)	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75	5.50 – 6.75
Other districts (Western Penna.)	.....	.....	.....	.....	.....
Motor Gasoline, Min. 70 octane:					
Bradford-Warren (Western Penna.)	(c)6.50	(c)6.50	(c)6.50	(c)6.50	5.75 – 6.50
"Q" Gasoline:					
Bradford-Warren (Western Penna.)	(c&d)6.75	(c&d)6.75	(c&d)6.75	(c&d)6.75	(c&d)6.75
Other Districts (Western Penna.)	(d) 6.25– 7.00	(d) 6.25 –7.00	(d) 6.25– 7.00	(d) 6.25– 7.00	(d) 6.25– 7.00

(a) Nominal. (b) For shipment to Texas and New Mexico destinations: Group 3 prices are quoted on northern shipment. (c) One refiner quoting. (d) To resellers holding licenses. (e) No price reported.

REFINERY TANK CAR MARKETS

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days). Prices in cents per gallon except heavy fuel oils in dollars per barrel of 42 gallons, tank car lots, f.o.b. refineries in districts designated, except where otherwise noted. Inter-refinery and export prices not included, unless so stated in the respective markets. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-33T; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Natural Gasoline

(Prices to blenders on freight basis shown below. Shipments may originate in any Mid-Continent manufacturing district.)

Prices Effective	Jan. 16	Jan. 9
F.O.B. GROUP 3		
Grade 26-70	2.75 – 3.00	3.50
F.O.B. BRECKENRIDGE		
Grade 26-70	2.75 – 3.00	3.25
CALIFORNIA (F.o.b. plants in Los Angeles basin)		
75-85, 350-375 e.p. for blending	6.25 – 6.50	6.25 – 6.50

Kerosine

WESTERN PENNA.		
Bradford-Warren:		
45 gravity w.w.	5.00 – 5.25	5.00 – 5.25
46 gravity w.w.	(e) 5.25– 5.375	(e) 5.25 –5.375
Other districts:		
45 gravity w.w.	4.625– 5.00	4.625– 5.00
46 gravity w.w.	(k) 4.875–5.125	(e)4.875
47 gravity w.w.	4.875– 5.25	4.875– 5.00
CENTRAL MICHIGAN (a)		
47-49 gravity w.w.	5.05 – 5.30	5.05 – 5.30
OKLAHOMA		
41-43 gravity w.w.	3.875– 4.25	3.875– 4.25
42-44 gravity w.w.	4.00 – 4.625	4.125– 4.625
KANSAS (For Kansas destinations only)		
41-43 gravity w.w.	(e)4.25	(e)4.25
42-44 gravity w.w.	4.375– 4.50	4.375– 4.50
N. TEX. (b)		
41-43 gravity w.w.	4.25 – 4.50	4.25 – 4.50
CENTRAL WEST TEXAS (Prices to truck transports)		
41-43 gravity w.w.	(f)	(f)
N. LA. (For shipment to La. and Ark.)		
41-43 gravity w.w.	4.00 – 4.125	4.00 – 4.125
ARK. (F.o.b. Ark. plant of one refiner, for shipment to Ark. and La.)		
41-43 gravity w.w.	4.50	4.50
CALIFORNIA		
40-43 gravity w.w.	5.00 – 7.00	5.00 – 7.00

Gas *and* Fuel Oils

WESTERN PENNA.		
Bradford-Warren:		
36-40 gravity	4.25 – 4.375	(e)4.125
Other districts: (Excluding Pittsburgh District Prices).		
36-40 gravity	4.00 – 4.25	4.00
CENTRAL MICHIGAN (a)		
P.W. Distillate	4.50 – 4.75	4.50 – 4.75
No. 3 gas oil, Str.	4.25 – 4.50	4.25 – 4.50
U.G.I. gas oil	3.75 – 4.25	3.75 – 4.25
Fuel Oils (Vis. at 100):		
500-700 Vis.	2.00 – 2.25	2.125– 2.25
300-500 Vis.	2.25 – 2.50	2.375– 2.50
100-300 Vis.	2.375– 2.875	2.625– 2.875
OKLAHOMA		
No. 1 prime white	3.625– 4.00	3.625– 4.125
No. 1 straw	3.50 – 3.75	3.50 – 3.75
No. 2 straw	3.375– 3.625	3.375– 3.625
No. 2 dark	(e)3.375	(e)3.375
U.G.I. gas oil	2.875– 3.375	2.875– 3.375
28-30 gravity fuel oil	(e)3.25	(e)3.25
28-30 gravity zero fuel	3.125– 3.50	3.125– 3.50
24-26 gravity fuel	(e)$0.925	(e)$0.925
14-16 gravity fuel	(e)$0.70	(e)$0.70
KANSAS (For Kans. destinations only).		
No. 1 p.w. fuel oil	3.75 – 4.125	3.875– 4.125
10-14 gravity fuel oil	$0.45 –$0.80	$0.45 –$0.80
N. TEX. (b)		
No. 1 Prime white	(e)4.00	(e)4.00
N. LA. (For shipment to La. and Ark.)		
20-24 gravity fuel	(e) $1.00–$1.05	(e) $1.00–$1.05
16-20 gravity fuel	(e) $0.80–$0.85	(e) $0.80–$0.85
10-14 gravity fuel	(e) $0.70–$0.75	(e) $0.70–$0.75
CENTRAL WEST TEXAS (Prices to truck transports)		
38-42 gravity p.w. distillate	(f)	(f)
ARK. (F.o.b. Ark. plant of one refiner, for shipment to Ark. and La.)		
No. 2 fuel	3.625	3.625
28-30 gravity gas oil, zero	3.375	3.375
Tractor Fuel	(j)4.25	(j)4.25

Prices Effective	Jan. 16	Jan. 9
CALIFORNIA		
San Joaquin Valley:		
Heavy fuel	$0.55 –$0.75	$0.55 –$0.75
Light fuel	$0.65 –$0.85	$0.65 –$0.85
Diesel fuel (per gal.)	3.25 – 4.00	3.25 – 4.00
Stove dist. (per gal.)	3.50 – 5.00	3.50 – 5.00
Los Angeles:		
Heavy fuel	$0.50 –$0.90	$0.50 –$0.90
Light fuel	$0.60 –$1.00	$0.60 –$1.00
Diesel fuel (per gal.)	2.75 – 4.00	2.75 – 4.00
Stove dist. (per gal.)	3.00 – 5.00	3.00 – 5.00
San Francisco:		
Heavy fuel	$0.95	$0.95
Light fuel	$1.05	$1.05
Diesel fuel (per gal.)	4.50	4.50
Stove dist. (per gal.)	5.50	5.50

Note: All above heavy fuels meet Pacific specification 400; light fuel, spec. 300; Diesel fuels, spec. 200; and stove distillate, spec. 100.

Neutral Oils

WESTERN PENNA. (Refiners report no open spot market sales being made to jobbers and give following as their quotations only.)

Viscous Neutrals No. 3 col. (*Viscosity at 70° F.*)		
200 Vis. (180 at 100°) 420-425 fl.		
0 p.t.	17.50	17.50 –19.00
10 p.t.	16.50	16.50 –18.00
15 p.t.	16.00	16.00 –17.50
25 p.t.	15.00	15.00 –16.00
150 Vis. (143 at 100) 400-405 fl.		
0 p.t.	(k)17.00	17.00
10 p.t.	(k)16.00	16.00
15 p.t.	(k)15.00	15.00
25 p.t.	13.00	13.00 –14.00

SOUTH TEXAS Vis. Color		
Pale Oils: (*Vis. at 100°F.*)		
100 No. 1½-2½	4.50 – 5.00	4.50 – 5.00
200 No. 2-3	6.00 – 6.25	6.00 – 6.25
300 No. 2-3	6.50 – 6.75	6.50 – 6.75
500 No. 2½-3½	7.50 – 7.75	7.50 – 7.75
750 No. 3-4	8.00 – 8.25	8.00 – 8.25
1200 No. 3-4	8.375– 8.75	8.375– 8.75
2000 No. 4	8.50 – 9.25	8.50 – 9.25
Red Oils:		
200 No. 5-6	6.00 – 6.25	6.00 – 6.25
300 No. 5-6	6.50 – 6.75	6.50 – 6.75
500 No. 5-6	7.50 – 7.75	7.50 – 7.75
750 No. 5-6	8.00 – 8.25	8.00 – 8.25
1200 No. 5-6	8.375– 8.75	8.375– 8.75
2000 No. 5-6	8.50 – 9.25	8.50 – 9.25

Note: Red oil prices cover oils with green cast; blue cast red oils are slightly lower in some cases.

MID-CONTINENT (Vis. at 100° F.; F.o.b. Tulsa basis).

Pale Oils: (0 to 10 P.P.) Vis. Color		
60-85—No. 2	5.50	5.50
86-110—No. 2	6.00	6.00
150—No. 3	9.00	9.00
180—No. 3	9.50 –10.00	9.50 –10.00
200—No. 3	10.00 –10.50	10.00 –10.50
250—No. 3	11.00 –11.50	11.00 –11.50
280—No. 3	12.50	12.50
300—No. 3	13.00	13.00
Red Oils:		
180—No. 5	(e)9.00	(e)9.00
200—No. 5	9.00 –10.00	9.00 –10.00
280—No. 5	11.50 –11.75	11.50 –11.75
300—No. 5	(e)12.00	(e)12.00

Note: The following oils, of 15 to 25 p.p., are generally quoted these amounts under 0-10 p.p.: viscous oils, 0.5c; non-viscous, 0.25c. Viscous oils (150-300 vis.), No. 4 color, generally are quoted 0.5c above No. 5 color oils.

CHICAGO (Vis. at 100° F.)

Pale Oils 0 to 10 p.p. Vis. Color		
60-85—No. 2	7.25	7.25
86-110—No. 2	7.75	7.75
150—No. 3	9.00	9.00
180—No. 3	10.00	10.00
200—No. 3	10.50	10.50
250—No. 3	11.50	11.50

Prices Effective	Jan. 16	Jan. 9
CHICAGO (Continued)		
Red Oils:		
180—No. 5	9.00	9.00
200—No. 5	9.50	9.50
250—No. 5	10.50	10.50
280—No. 5	11.50	11.50
300—No. 5	11.75	11.75

Note: Viscous oils, 15 to 30 p.p. are quoted 0.5c lower; 60-85 and 86-110 No. 2 non-viscous oils, 15 to 30 p.p., 0.25c lower. To obtain delivered prices in Chicago, add 0.25c per gal.

Cylinder Stocks

MID-CONTINENT (F.o.b. Tulsa basis)		
Bright Stocks:		
190-200 Vis. at 210 °D.	(e)19.00	(e)19.00
150-160 Vis. at 210°D:		
0 to 10 p.p.	14.25 –16.00	14.25 –16.00
10 to 25 p.p.	13.50 –15.50	13.50 –15.50
25 to 40 p.p.	13.50 –15.00	13.50 –15.00
150-160 vis. at 210° E.	12.50 –15.00	12.50 –15.00
120 Vis. at 210° D		
0 to 10 p.p.	14.50 –15.125	14.50 –15.125
25 to 40 p.p.	(e)14.25	(e)14.25
600 S.R. Dark Green	(f)	(e)7.50
600 S.R. Olive Green	6.50 – 7.50	(e)6.50
631 S.R.	(e)12.50	(e)12.50
Black Oil	3.50 – 4.00	3.50 – 4.00

CHICAGO (Viscosity at 210°)		
Unfiltered Steam Refined:		
140	9.00	9.00
160	10.00	10.00
200	11.00	11.00
Bright stocks, 160 vis. at 210. No. 8 color:		
0 to 10 p.p.	15.75	15.75
15 to 25 p.p.	14.75	14.75
30 to 40 p.p.	14.25	14.25
E filtered Cyl. Stock	13.50	13.50

Note: To obtain prices delivered in Chicago, add 0.25c per gal.

WESTERN PENNA. (Refiners report no open spot market sales being made to jobbers and give following as their quotations only.)

600 S.R. filterable	8.00	8.00
650 S.R.	9.00	9.00 –10.00
600 fl.	10.50	10.50
630 fl.	(h)13.00	(h)13.00
Bright stock, 145-155 vis. at 210°, 540-550 flash, No. 8 color:		
10 p.t.	17.00	17.00
15 p.t.	16.00	16.00
25 p.t.	14.00	14.00

Petrolatums

WESTERN PENNA. (In bbls., carloads; in tank cars, 0.5c per lb. less. One refiner reports he equalizes freight with nearest refinery to destination)

Snow White	5.875– 6.125	5.875– 6.125
Lily White	4.875– 5.125	4.875– 5.125
Cream White	3.875– 4.125	3.875– 4.125
Light Amber	2.50	2.50
Amber	2.25	2.25
Red	(e)2.125	(e)2.125

Wax

WESTERN PENNA. (Refiners report no open spot market sales being made to jobbers and give following as their quotations only. In bbls., carloads, New York)

122-124 A.m.p., w.c. scale	(k) 2.35 –2.40	(h)2.35
124-126 A.m.p., w.c. scale	2.35 – 2.40	2.35 – 2.40

OKLAHOMA (In bbls. or burlap bags, carloads)

124-126 A.m.p., w.c. scale	2.40 – 2.50	(e) 2.40 – 2.50

CHICAGO (In bags, carload lots. Melting points are E.M.P. (A.S.T.M.) methods; add 3° F. to convert into A.m.p.)

Fully refined:		
122-124	4.00	4.00
125-127	(i)4.10	(i)4.10
127-129	(i)4.45	(i)4.45
130-132	(i)4.75	(i)4.75
132-134	(i)5.00	(i)5.00
135-137	(i)5.75	(i)5.75

(a) Prices f.o.b. Central Michigan refinery group basis, for shipment within Mich. Shipments may originate at plants outside Central group. (b) For shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments. (c) Excluding Detroit shipment. (d) Nominal. (e) One refiner quoting. (f) No price reported. (g) To resellers holding licenses. (h) Two refiners quoting. (i) Same prices quoted in bags or slabs loose. (j) For shipment to Ark. points only. (k) Two suppliers quoting.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline do not include taxes; they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine taxes, where levied, are indicated in footnotes. Discounts to various classes of buyers also are shown in footnotes. These prices in effect Jan. 16, 1939, as posted by principal marketing companies at their headquarters offices, but subject to later correction.

S. O. New Jersey

Esso lene
(Regular Grade)

	Consumer Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
*Atlantic City, N. J.	6.9	8.7	4	8
*Newark, N. J.	6.9	8.7	4	8
Annapolis, Md.	7.85	9.35	5	9.5
Baltimore, Md.	7.25	8.75	5	8.5
Cumberland, Md.	8.65	11.15	5	10
Washington, D. C.	7.5	9	3	9.5
Danville, Va.	8.45	10.95	6	12.9
Norfolk, Va.	7.25	9.75	6	11.5
Petersburg, Va.	7.55	10.05	6	11.7
Richmond, Va.	7.55	10.05	6	11.7
Roanoke, Va.	8.75	11.25	6	11
Charleston, W. Va.	8.05	10.55	6	12.6
Parkersburg, W. Va.	7.35	9.35	6	11.2
Wheeling, W. Va.	8.35	10.25	6	12.2
Charlotte, N. C.	8.65	11.15	7	12.1
Hickory, N. C.	9.15	11.65	7	12.5
Mt. Airy, N. C.	8.95	11.45	7	12.3
Raleigh, N. C.	8.25	10.75	7	11.6
Salisbury, N. C.	8.75	11.25	7	12.2
Charleston, S. C.	7.25	9.75	7	10.6
Columbia, S. C.	8.25	10.25	7	11.6
Spartanburg, S. C.	8.95	11.45	7	12.4

Discount to undivided dealers, thru territory, except New Jersey points, which see in "Note" below: Dealer t.w. price less 0.5c per gal.

*Effective Dec. 1, 1938, S. O. New Jersey posted a minimum retail resale price of 11.2c thru New Jersey, except Trenton area and Cumberland county.

Note: While the above posted prices continue at Atlantic City and Newark, N. J., dealers will pay a net price of 8.2c per gal. for Esso lene. Dealers having pumps marked only Esso, Esso lene and "Standard" White gasoline will pay 7.7c per gal. for Esso lene.

Price basis to commercial consumers on motor fuels, in tank wagon delivery: To contract accounts, purchasing at least one full compartment at a time by hose connection: Effective March 12, 1937, in New Jersey, and March 8 in Maryland, District of Columbia, and in Arlington and Fairfax Counties in Virginia, on yearly purchases: from 2,500 to 100,000 gals., consumer t.w. price at time and place of delivery; 100,000 gals. per year consumer tank car price, plus 0.5c per gal. Generally consumer t.w. price in foregoing states is equivalent of dealer t.w. price, less 0.5c per gal.

Effective May 15, 1937, on Esso lene and Esso (by tank wagon) in West Virginia and Virginia (except Arlington and Fairfax Counties, which see above), commercial consumers taking deliveries of 50 gals. (West Va. 100 gals.) or more at one time will be billed at the posted consumer t.w. price. Deliveries less than 50 gals. (West Va. 100 gals.) will be billed at 4c per gal over posted consumer t.w. price. Generally, posted consumer t.w. price will be equivalent to the dealer price less 0.5c per gal.

Effective Dec. 19, 1938, in North Carolina, on single deliveries, prices figured over posted consumer tank car price: 50 to 149 gals. inclusive, 1c over; 150 gals. and over, 0.5c; less than 50 gals., 6c over t.c.

Effective Dec. 16, 1938, in South Carolina, on single deliveries, prices figured over posted consumer tank car price: 25 to 149 gals., 1c over; 150 gals. and over, 0.5c; less than 25 gals. at one time, 6c over t.c.

Kerosine Discount: 1c off t.w. price for 25 gals., or more, under contract thru territory (Baltimore City contract not necessary) except no discount in state of New Jersey.

Socony-Vacuum Oil Co., Inc.

(S. O. New York Division)
Socony Mobilgas
(Regular Grade)

	Consumer Tank Car	"Split" Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Metropolitan N. Y. City: Boroughs of Manhattan, Bronx and Brooklyn (Kings and Queens)	6.75	8.4	*5	8
Borough of Richmond (Staten Is.)	6.75	8.4	*5	8
Albany, N. Y.	6.75	8.8	5	8
Binghamton, N. Y.	8	9.5	5	8.50
Buffalo, N. Y.	7	7.5	5	7.5
Jamestown, N. Y.	7.1	8.4	5	8.25
Plattsburg, N. Y.	7.3	9.3	5	9
Rochester, N. Y.	7.7	8.5	5	8.5
Syracuse, N. Y.	7.4	8.5	5	8.5
Danbury, Conn.	7.1	9.1	4	8
Hartford, Conn.	6.9	8.9	4	6.5
New Haven, Conn.	6.8	8.3	4	6
Bangor, Me.	7.25	8.5	5	8
Portland, Me.	6.75	9	5	7.5
Boston, Mass.	6.5	8.5	4	7.5
Concord, N. H.	7.6	9.7	5	8.25
Lancaster, N. H.	8.5	11.2	5	9.5
Manchester, N. H.	7.3	9.5	5	8
Providence, R. I.	6.5	8.5	4	7
Burlington, Vt.	7.3	9.7	5	9
Rutland, Vt.	7.5	10	5	8

*Plus 2% city sales tax computed at time of each sale.

Discount to undivided dealers: 0.5c less than "split" dealer t.w.

Price basis to commercial consumers: Effective about Nov. 15, 1936 in New York and New England for tank wagon delivery: monthly purchases of 25,000 gals. or over, pay consumer tank car price at point of delivery, plus 0.5c gal.; monthly purchases of 5,000 to 25,000 gals., pay undivided dealer tank wagon price at point of delivery; monthly purchases of less than 5,000 gals., pay divided dealer tank wagon price at point of delivery. Private consumers pay undivided dealer tank wagon price at point of delivery, plus 2c gal.

Atlantic Refining

Atlantic White Flash Gasoline
(Regular Grade)

	Commercial Tank Car	Dealer T.W.	Gasoline Taxes	Kerosine T.W.
Philadelphia, Pa.	7	8	5	10
Pittsburgh	8	9.5	5	10.5
Allentown	7.5	9	5	10.5
Erie	8	9	5	10
Scranton	6.9	7.4	5	10.5
Altoona	8	10	5	10.5
Harrisburg	7	8.5	5	10.5
Williamsport	7.5	9	5	10.5
Dover, Del.	...	7.5	5	10.5
Wilmington	...	8	5	9.75
Boston, Mass.	...	8	4	7.5
Springfield, Mass.	...	9	4	7.5
Worcester, Mass.	...	9	4	7.5
Fall River, Mass.	...	8.5	4	8
Hartford, Conn.	...	8.9	4	7
New Haven, Conn.	...	8.3	4	7
Providence, R. I.	...	8.5	4	7
Atlantic City, N. J.	...	8.2	4	8
Camden, N. J.	...	7.6	4	8
Trenton, N. J.	...	8.2	4	8
Annapolis, Md.	...	9.35	5	9.5
Baltimore, Md.	...	8.75	5	8.5
Hagerstown, Md.	...	9.85	5	10
Richmond, Va.	...	10.05	6	11.7
Wilmington, N. C.	...	9.85	7	10.8
Brunswick, Ga.	...	9	7	*10.5
Jacksonville, Fla.	...	8	8	10

*Georgia has kerosine tax of 1c per gal., not included in above price.

Discount to undivided dealers: Dealer t.w. less 0.5c per gal. except in Georgia and Florida, dealer t.w. and undivided dealer price is same.

Price basis to commercial consumers: consumers under contract, in Penna. and Delaware, effective Mar. 11, 1937, on yearly gasoline purchases taking full compartment hose deliveries, using 100,000 gals. or more per year, tank car price plus 0.5c per gal.; consumers taking less than 100,000 gals., undivided dealer price. Consumers under contract and not under contract, taking less than full compartment delivery, and consumers not under contract taking full compartment delivery, get divided dealer price. Consumers taking less than 25 gals., t.w. delivery, get 4c above undivided dealer price.

Discount on kerosine: Effective Oct. 29, 1936, in Pennsylvania and Delaware, 2c per gal. off t.w. price on t.w. deliveries of 25 gals. or more at one time.

S. O. Ohio

Sohio X-70 Gasoline
(Regular Grade)

	Consumer T.W.	†Divided Dlr.	Gasoline Taxes	Kerosine T.W.
Ohio Statewide	11	10	5	*12
Counties where some prices are below statewide:				
Ashland, Butler, Columbiana, Defiance, Pickaway, Preble, Warren and Wayne:	10.5	9.5	5	....
Clark, Clinton, Fairfield, Franklin, Fulton, Greene, Montgomery, Paulding, Stark, Tuscarawas, Washington, and Williams:	10	9	5	....
Hamilton	11	9	5	....
Knox	10.5	9	5	....
Lucas	9	8	5	....

S. O. Ohio Cont'd

Renown Gasoline
(Third Grade)

Ohio Statewide	10.5	9.5	5	....
Counties where some prices are off statewide:				
Ashland, Clark, Columbiana, Defiance, Greene, Montgomery, Pickaway, Washington and Wayne:	10	9	5	....
Clermont, Darke, and Miami:	11	9.5	5	....
Clinton, Fairfield, Franklin, Fulton, Paulding, Stark, Tuscarawas and Williams:	9.5	8.5	5	....
Hamilton	11	9	5	....
Knox	10	8.5	5	....
Lucas	8.5	7.5	5	....

Kerosine Prices
(Off Statewide Level)

Kerosine prices are off statewide level in the following counties:

Allen, Auglaize, Champaign, Columbiana, Darke, Geauga, Greene, Hardin, Logan, Mahoning, Mercer, Preble, Putnam, Shelby, Trumbull and Van Wert *11.5
Paulding *11
Ashtabula *10.5
Fayette, Madison, Pickaway, Portage and Summit *8.5

†This price also to authorized agents, exclusive of 0.5c rental. Discount to undivided dealers: 0.5c less than divided dealer t.w.

*Ohio has kerosine tax of 1c per gal., not included in above prices.

Commercial Tank Wagon Q.D.A. to contract accounts: Effective Oct. 20, 1937, thru Ohio except in counties listed below, on monthly purchases, off posted consumer t.w. price: 0 to 999 gals., 0.5c; 1,000 to 19,999 gals., 1.5c; 20,000 gals. and over, 2.5c. The counties where Q.D.A. differs from statewide are: Allen, Ashtabula, Auglaize, Butler, Champaign, Clinton, Columbiana, Cuyahoga, Darke, Defiance, Erie, Fulton, Geauga, Hamilton, Hancock, Hardin, Henry, Highland, Lake, Logan, Lorain, Lucas, Mahoning, Mercer, Ottawa, Paulding, Putnam, Sandusky, Scioto, Shelby, Trumbull, Van Wert, Warren, Williams and Wood.

Sales tax: Ohio's 3% sales tax, effective Jan. 27, 1935, is added "where assessable, to regular posted prices," S. O. Ohio says.

On kerosine, prices to resellers and commercial consumers are posted generally at 3c per gal. below consumer t.w. price in any quantity, when such prices are on statewide level.

S. O. Kentucky

Crown Gasoline
(Regular Grade)

	Consumer T.W.	Net Dlr.	Gasoline Taxes	Kerosine T.W.
Covington, Ky.	11.5	8.5	6	9.5
Lexington, Ky.	13	10	6	10
Louisville, Ky.	11.5	8.5	6	9
Paducah, Ky.	12.5	9.5	6	9
Jackson, Miss.	10.5	7.5	7	*9
Vicksburg, Miss.	12	9	7	*8.5
Birmingham, Ala.	13	10	*8	8.5
Mobile, Ala.	12	9	*9	8.5
Montgomery, Ala.	12	10	*9	*9.5
Atlanta, Ga.	13.5	10.5	7	*7.5
Augusta, Ga.	12.5	9.5	7	*9
Macon, Ga.	11	8	7	*10
Savannah, Ga.	12	9	7	*7
Jacksonville, Fla.	12	9	8	8
Miami, Fla.	12	9	8	8
Pensacola, Fla.	12	9	*9	8
Tampa, Fla.	12	9	8	8

Kyso Gasoline
(Third Grade)

Covington, Ky.	10	7.5	6	....
Lexington, Ky.	11.5	9	6	....
Louisville, Ky.	10	7.5	6	....
Paducah, Ky.	10.5	8	6	....
Jackson, Miss.	8.5	6	7	....
Vicksburg, Miss.	10	7.5	7	....
Birmingham, Ala.	11	8.5	*8	....
Mobile, Ala.	10	7.5	*9	....
Montgomery, Ala.	11	8.5	*9	....
Atlanta, Ga.	11	8.5	7	....
Augusta, Ga.	11	8.5	7	....
Macon, Ga.	8.5	6	7	....
Savannah, Ga.	9.5	7	7	....
Jacksonville, Fla.	10.5	8	8	....
Pensacola, Fla.	10	7.5	*9	....
Tampa, Fla.	10.5	8	8	....

Discounts to all tank wagon consumers: Effective Jan. 4, 1937, thru territory, on Crown gasoline, 3c per gal. below consumer t.w. price; on Kyso, 2.5c below, regardless of quantity purchased, per month

Above prices include these inspection fees on both gasoline and kerosine unless otherwise specified, per gallon, figured on basis of 50 gallons per barrel:
Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/5c per gal. in lots up to 25 bbls.; 2/25c per gal. in lots of 25 bbls. or more; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline, 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. lots of more than 50 in bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 3/100c.
Kerosine inspection fee only: Iowa, 3/50c; Michigan, 1/5c per gal.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline do not include taxes; they do, however, include inspection fees as shown in general footnote. Gasoline taxes shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes, where levied, are indicated in footnotes. Discounts to various classes of buyers also are shown in footnotes. These prices in effect Jan. 16, 1939 as posted by principal marketing companies at their headquarters offices, but subject to later correction.

*Taxes: In the tax column is included these city and county gasoline taxes at the following points: Mobile, 2c city; Birmingham, 1c city; Montgomery 1c city and 1c county; Pensacola, 1c city. Georgia and Montgomery, Ala. have kerosine taxes of 1c per gal., and Mississippi 0.5c, not included in above prices.

S. O. Indiana

Red Crown (*Regular Grade*)
Stanolind (*Third Grade*)

	Red Crown Cons. T.W.	Dealer Prices Red Crown	Stano-lind	Gaso-line Taxes	Kero-sine T.W.
Chicago, Ill.	11.1	8.1	6.4	4	10
Decatur, Ill.	11.1	8.6	8	4	10
Joliet, Ill.	11.1	8.6	8.4	4	10
Peoria, Ill.	11.1	9.1	8.5	4	10
Quincy, Ill.	10.9	8.9	6.7	4	8.7
Indianapolis, Ind.	11.8	10.3	8.9	5	*9.5
Evansville, Ind.	11.6	10.1	9.1	5	*10.5
South Bend, Ind.	12.1	10.6	9.2	5	*9
Detroit, Mich.	9.1	7.6	7.1	4	9
Grand Rapids, Mich.	10.8	9.5	8	4	9.7
Saginaw, Mich.	11.8	10.3	8.8	4	9.3
Green Bay, Wis.	11.9	10	9	5	10.3
Milwaukee, Wis.	11.3	8.8	8.3	5	10.2
La Crosse, Wis.	11.5	10	9.5	5	10.4
Minneapolis-St. Paul	11	9.5	8.5	5	10.4
Duluth, Minn.	11.9	10.4	8.9	5	10.8
Mankato, Minn.	11.5	10	9.5	5	8.9
Des Moines, Ia.	10.9	9.4	7.5	4	*9.8
Davenport, Ia.	11.1	9.6	9.1	4	*10
Mason City, Ia.	11.3	9.8	9.3	4	*10.2
St. Louis, Mo.	10.2	8.7	7.5	*4	8
Kansas City, Mo.	10.4	7.9	6.4	*4	7.5
St. Joseph, Mo.	10.4	7.2	6	*4	9.3
Fargo, N. D.	12.7	11.2	10.7	4	11.6
Minot, N. D.	14	12.5	12	4	12.9
Huron, S. D.	12	10.5	10	5	10.9
Wichita, Kans.	9.9	6.6	5.5	4	7.3

*Taxes: in the tax column is included these city and state gasoline taxes at following points: Kansas City, St. Joseph and St. Louis, 1c city tax. Kerosine taxes: Indiana has 4c, Iowa 3c per gal. state tax, not included in above prices.

Discount to commercial consumers: Effective Jan. 1, 1935, thru territory, except Michigan effective Feb. 1, on purchases per month, discount off t.w. prices; all gasolines, 25 to 1,000 gals., at t.w. price; 1,000 gals., or more, 1.5c off t.w. on Ethyl and Red Crown, and 1c on Stanolind (latter effective June 9, 1937). Minimum delivery is 25 gals.

S. O. Nebraska

Standard Red Crown Gasoline (*Regular Grade*)

	T.W. Dealer	Gaso-line Taxes	Kero-sine T.W.
Omaha, Neb.	11.5	6	10.3
McCook	11.5	6	10
Norfolk	11.9	6	10.7
North Platte	12.3	6	11
Scottsbluff	11	6	11.8

Discounts to commercial consumers: for tank wagon deliveries covered only by Standard Commercial Consumer Contract, effective January 1, 1935.

S. O. Louisiana

Essolene (*Regular Grade*)

	Consumer Tank Car	Dealer T.W.	Gaso-line Taxes	Kero-sine T.W.
Little Rock, Ark.	7.25	9.75	7.5	11
Alexandria, La.	6.75	9.25	8	*11.5
Baton Rouge, La.	6.75	9.25	8	* 9.5
New Orleans, La.	6.75	9.25	*10	* 9
Lake Charles, La.	6.75	9.25	8	*11.5
Shreveport, La.	5.5	8	8	*10
Lafayette, La.	7	9.5	8	*11.5
Bristol, Tenn.	10.25	11	8	14.5
Chattanooga, Tenn.	9.5	12	8	14
Knoxville, Tenn.	10	12.5	8	14.5
Memphis, Tenn.	8	10.5	8	12.5
Nashville, Tenn.	9	11.5	8	12

*Taxes: New Orleans gasoline tax includes 7c state, 1c federal, and 2c parish tax. Louisiana has kerosine tax of 1c per gal.; in addition New Orleans has 1c parish tax, none of which are included in above prices.

Price basis to dealers: Undivided dealers get dealer price, less 0.5c.

Price basis to commercial consumers: Effective May 15, 1937, thru territory; commercial consumers taking 50 gals. or more at one time will be billed at posted consumer t.w. price; those taking less than 50 gals. at one time will be billed at 4c per gal. over posted consumer t.w. price. Generally, the posted consumer t.w. price will be equivalent to the dealer price less 0.5c per gal.

Humble Oil & Refining Co.

Humble Motor Fuel (*Regular Grade*)

	*T.W.	S.S.	Gaso-line Taxes	Kero-sine T.W.
Dallas, Tex.	6	10	5	8
Ft. Worth, Tex.	7	12	5	7
Houston, Tex.	9.5	13.5	5	8
San Antonio, Tex.	9	13	5	8

U. S. Motor Gasoline (*Third Grade*)

Dallas, Tex.	5.5	8	5
Ft. Worth, Texas	6	9	5
Houston, Tex.	6	10.5	5
San Antonio, Tex.	6	10.5	5

*Price is t.w. price to all classes of dealers and consumers.

Continental Oil

Conoco Bronze (*Regular Grade*)
Demand (*Third Grade*)

	—Dealer Prices— Conoco Bronz-a-ze	De-mand	Gaso-line Taxes	Kero-sine ‡T.W.
Denver, Colo.	10.5	9.5	5	11.5
Grand Junc., Colo.	11	10	5	15
Pueblo, Colo.	9.5	7.5	5	10.5
Casper, Wyo.	12	11	5	11.5
Cheyenne, Wyo.	10	9	5	13
Billings, Mont.	12	10	6	13
Butte, Mont.	13.5	10.5	6	15.5
Great Falls, Mont.	12	10	6	15.5
Helena, Mont.	14	13	6	15.5
Salt Lake City, Utah	11	10	5	16
Boise, Ida.	13	10.5	6	18
Twin Falls, Ida.	13.5	12.5	6	18
Albuquerque, N. M.	9.5	8.5	†6.5	10
Roswell, N. M.	8	6.5	†6.5	10.5
Santa Fe, N. M.	8.5	8.5	*7	12
Muskogee, Okla.	8.5	6	5	7
Oklahoma City, Okla.	6.5	5	5	6
Tulsa, Okla.	5	4	5	6
Ft. Smith, Ark.	8.25	5.75	5	7.5
Little Rock, Ark.	9.25	7.625	7.5	9
Texarkana, Ark.	7	6	5	8

†Includes city tax of 0.5c.
*Includes 1c city tax.
‡Prices are in t.w. deliveries to consumers and dealers.

S. O. California

Standard Gasoline (*Regular Grade*)

	T.W.	S.S.	Gaso-line Taxes	Kero-sine T.W.
San Francisco, Cal.	13.5	14.5	4	11.5
Los Angeles, Cal.	13	14	4	10
Fresno, Cal.	14.5	15.5	4	12.5
Phoenix, Ariz.	15.5	16.5	6	*12.5
Reno, Nev.	15.5	16.5	5	13.5
Portland, Ore.	14	15	6	13.5
Seattle, Wash.	14	15	6	13.5
Spokane, Wash.	17	18	6	16.5
Tacoma, Wash.	14	15	6	13.5

Flight Gasoline (*Third Grade*)

San Francisco, Cal.	12	13	4	....
Los Angeles, Cal.	11.5	12.5	4	....
Fresno, Cal.	13	14	4	....
Reno, Nev.	14	15	5	....
Phoenix, Ariz.	14	15	6	....
Portland, Ore.	12.5	13.5	6	....
Seattle, Wash.	12.5	13.5	6	....
Spokane, Wash.	15.5	16.5	6	....
Tacoma, Wash.	12.5	13.5	6	....

*Arizona has kerosine tax of 5c per gal., not included in above prices.

Discount to dealers, thru territory: on gasoline, off t.w. price on Standard Ethyl and Standard Gasoline, to 100% dealers, 3c; to split dealers in California only; 2c; on Flight gasoline, 100% dealers, 2c; and split dealers in California only; 2c.

On Stanavo Aviation Gasoline, to all classes of dealers, 3c off t.w.

To commercial consumers: off tank wagon price: on single deliveries of 40 gallons and over. Stanavo Aviation, Standard Ethyl and Standard Gasolines, 3c. Flight Gasoline, 2c per gallon. Tank wagon delivery, less than 40 gals., 1c per gal. above posted t.w. price. Discounts on kerosine: in tank cars, 3c off tank truck price; plant deliveries to jobbers, 2.5c below tank truck price.

Canada

PRICES OF IMPERIAL OIL LTD.
Per Imperial Gallon, which is 1.2 U. S. Gallons

3-Star Imperial Gasoline (*Regular Grade*)

	T.W	Gasoline Taxes	Kero-sine T.W.
Hamilton, Ont.	15	6	15.5
Toronto, Ont.	15	6	15.5
Brandon, Man.	21.1	7	22.3
Winnipeg, Man.	20.5	7	20.7
Regina, Sask.	19	7	21
Saskatoon, Sask.	21.3	7	23.3
Edmonton, Alta.	19.5	7	21.5
Calgary, Alta.	16.5	7	18.5
Vancouver, B. C.	16	7	23
Montreal, Que.	14	6	14.5
St. John, N. B.	13.5	10	17.5
Halifax, N. S.	13.5	10	17.5

Discounts to undivided dealers, 1c off t.w. price, except Maritime Provinces where undivided dealers pay t.w. price. Divided dealers pay t.w. price, thru territory.

Aviation Gasoline

Following are tank car, tank wagon or dealer prices, as indicated, of aviation gasoline in several marketing territories.

S. O. OHIO
Thru Ohio
Esso Aviation

	Consumer T.W.	Gasoline Taxes
74 octane	15.5	5
80 octane	16.5	5
87 octane	17.5	5

Discounts: For delivery on contract to hangar operators and resellers: 2c below consumer posted t.w. price, shown above.

S. O. INDIANA
Stanavo Ethyl Aviation Gasoline
73 Octane Number

Chicago, Ill.	14.9	4
Detroit, Mich.	16.5	4
Milwaukee, Wis.	15.1	5
Minneapolis, Minn.	15.3	5
St. Louis, Mo.	14.5	3
Kansas City, Mo.	14.2	*4
Fargo, N. D.	16.5	4
Huron, S. D.	15.8	5

*Includes 1c city tax.

HUMBLE OIL & REFINING CO.
Aviation Gasoline

	Tank Car
Baytown, Tex.	8.5

CONTINENTAL OIL CO.
Conoco Special Gasoline

	Dealer Price	Gasoline Taxes
Denver, Colo.	14.5	5
Cheyenne, Wyo.	15	5
Helena, Mont.	16	6
Salt Lake City, Utah	17.5	5
Albuquerque, N. M.	14	*6.5

*Includes city tax of 0.5c.

S. O. CALIFORNIA
Stanavo Aviation Gasoline

	T.W.	
Phoenix, Ariz.	17.5	6
Los Angeles, Cal.	15	4
San Francisco, Cal.	15.5	4
Reno, Nev.	17.5	5
Portland, Ore.	16	6
Seattle, Wash.	16	6
Spokane, Wash.	19	6

Note: For discounts, etc., see note under Standard and Flight gasoline above.

Naphtha (In Tank Wagon)

S. O. NEW JERSEY

	Posted Tank Wagon Prices Mineral Spirits	V.M.&P.
Newark, N. J.	11.5	15.5
Baltimore, Md.	15.5	....
Washington, D. C.	15	....

Discounts: Buyers taking following quantities, at one time, get these discounts: Newark, 2c per gal. on 200 gals. or more; less than 200 gals., 0.5c higher price. Baltimore 2c off on 25 to 100 gals. and 3c on over 100 gals. Washington, 2c off to contract buyers.

SOCONY-VACUUM OIL CO.

Buffalo, N. Y.	10.5	12
*New York City	9.5	10.5
Rochester, N. Y.	12	12
Syracuse, N. Y.	12	14.5
Boston, Mass.	11	11
Bridgeport, Conn.	11	11.5
Hartford, Conn.	10.5	11
Providence, R. I.	11	12

*Prices apply to consumers only in quantities over 1,000 gals. annually. For quantities under 1,000 gals. annually, add 0.5c per gal.

ATLANTIC REFINING CO.

Philadelphia, Pa.	11.5	12.5
Lancaster, Pa.	13	14
Pittsburgh, Pa.	12.5	14.5

Note: Prices for Mineral Spirits also apply to Stoddard Solvent; and prices for V.M.&P. Naphtha apply also to Light Cleaners Naphtha.

S. O. OHIO

	S.R. Solvent	V.M.&P. Naphtha
Thru Ohio	12.5	13.5

Note: V.M.&P. Naphtha prices also apply on Dry Cleaners naphtha and special Varnolene; Varnolene and Sohio Solvent 0.5c below these prices. Discounts to contract consumers, off t.w. price: 300 to 999 gals., 0.5c; 1,000 to 2,499 gals., 0.75c; 2,500 to 4,999 gals., 1c; 5,000 or more gals., 1.5c.

TANK WAGON MARKETS

Tank car, tank wagon, dealer, and service station prices for gasoline do not include taxes; they do, however, include inspection fees as shown in general footnote. Gasoline taxes, shown in separate column, include 1c federal, and state taxes; also city and county taxes as indicated in footnotes. Kerosine tank wagon prices also do not include taxes; kerosine taxes, where levied, are indicated in footnotes. Discounts to various classes of buyers also are shown in footnotes. These prices in effect Jan. 16, 1939, as posted by principal marketing companies at their headquarters offices, but subject to later correction.

S. O. INDIANA

(Prices include state and federal taxes)

	Oleum Spirits	V.M.&P. Naphtha	Stanisol
Chicago, Ill.	16.2	16.5	15.9
Detroit, Mich.	19.2	18.2	19.7
Kansas City, Mo.	13.9	14.9	14.4
St. Louis, Mo.	14.2	15.2	12.9
Milwaukee, Wis.	18.8	19.8	19.3
Minneapolis, Minn.	19	20	17.7

Note: All prices, with exception of Missouri points, include state tax. Prices shown are base prices, before discounts.

Naphtha (In Tank Cars)

In Tank Cars (F. o. b. refinery or seaboard terminal except Ohio, delivered price.)

	V.M.&P. Naphtha	Solvent
Baltimore	10.5	9.5
New York Harbor	10	9
Philadelphia district	10.5	9
Boston	10.5	9.5
Providence	10.5	9.5
Ohio points, delivered	8.875	*8

*This is on rubber solvent.

Note: In Ohio, prices on D.C. naphtha and special. Varnolene are same as V.M.&P.; on Varnolene and Sohio Solvent, prices are 0.5c less than on V.M.&P

Latest Changes

From Jan. 10 to Jan. 16, inclusive. Dates and amounts of changes shown. See table for full current prices.

Socony-Vacuum Oil—Kerosine:

Danbury t. w. cut 1c, Jan. 13.

S. O. Indiana—Red Crown:

St. Louis t. w. and dealer price cut 0.5c, Jan. 16.
Milwaukee dealer cut 1c, Jan. 13.

Stanolind:

Milwaukee dealer cut 1c, Jan. 13.

Continental Oil—Conoco Bronz-z-z:

Roswell dealer price cut 3c, Jan. 13.
Cheyenne dealer up 2c, Jan. 14.
Texarkana dealer cut 2c, Jan. 14.

Demand Gasoline:

Roswell dealer cut 2c, Jan. 13.
Cheyenne dealer up 2c, Jan. 14.
Texarkana dealer cut 1c, Jan. 14.

Corrections

Notation of amount of change and dates not previously shown in table. Table in this issue is corrected to show these changes.

Atlantic Refining—Atlantic White Flash:

Boston dealer t. w. cut 0.5c, Jan. 9.
Jacksonville dealer t. w. cut 1c, Jan. 1.

S. O. Indiana—Red Crown:

Detroit consumer t. w. cut 1.2c, Dec. 16.

Continental Oil—Bronz-z-z and Demand:

Ft. Smith cut 1c, Jan. 6.
Pueblo Bronz-z-z cut 2c, Demand 3c, Jan. 9.

Kerosine:

Albuquerque t. w. cut 2c, Jan. 7.

Fuel Oil

S. O. New Jersey—No. 2 Fuel:

Annapolis t. w. up 0.25c, Jan. 13.

FUEL OIL

(Continued from page 103)

this product ranged from 4.5 to 4.75 cents.

Little change was noted in industrial fuels in the Chicago area, resellers said. Michigan refiners reported a 6000-barrel decrease in industrial fuel stocks and said their quotations were unchanged.

* * *

TULSA, Jan. 16.—Mild weather and resultant delay in replacement purchases of light fuels the past few weeks have been responsible for increased offerings of these oils in the open market, Mid-Continent refiners reported last week. Open spot sales were negligible and deliveries against contracts were light, according to reports. Quotations generally were unchanged, it was said.

Railroad takings of heavy fuel were light and refinery stocks still were top heavy, refiners said.

* * *

NEW YORK, Jan. 16.—The turn in the weather the second week of January, after several weeks of mild weather, has resulted in a pickup in fuel oil demand, both in the open market and against contracts according to reports of suppliers.

Most sellers in Boston and Providence reported advancing their prices for Nos. 1 and 2 oils 0.5 cent about the middle of the week. All sellers, however, did not advance their quotations.

Reports from Baltimore and Philadelphia were to the effect that wholesale fuel oil markets were unchanged. New York harbor suppliers also said their quotations were unchanged.

Wax

NEW YORK, Jan. 16.—Crude scale wax prices for the most part were unchanged in the domestic and export markets, both at New York and at the Gulf the second week of 1939, according to reports of suppliers.

Some sellers said they were asking 2.45 and 2.5 cents for white scale grades. Several said that shipments of this product had been good the latter half of December, and so far in January.

No change was reported in prices for fully refined waxes.

Borda Organizes Own Company

NEW YORK — C. A. Borda, for the past 12 years in charge of Philadelphia and Baltimore districts for James B. Berry Sons' Co., left the Berry company Jan. 1 to organize his own company, the East Coast Petroleum Co., trading as a wholesale marketer with offices in Philadelphia.

TANK WAGON MARKETS, HEATING OILS

Prices in Effect Jan. 16, 1939

Following are posted tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

	No. 1	No. 2	No. 4
S. O. NEW JERSEY			
Atlantic City, N. J.	8.0	6.25	6.25
Newark	8.0	6.25	6.25
Annapolis, Md	....	6.5	....
Baltimore	7.5	6.5	6.0
Washington, D. C.	7.25	6.75	6.75
Norfolk, Va.	7.0	6.0	6.0
Petersburg	7.25	6.25	....
Richmond	7.25	6.25	6.25
Charlotte, N. C.	8.75	7.75	....
Hickory	....	8.25	....
Raleigh	8.75	7.25	....
Charleston, S. C.	8.5	7.0	....
Columbia	9.5	8.0	....
Spartanburg	10.2	8.7	....

SOCONY-VACUUM OIL CO. INC.
(S. O. New York Division)

	No. 2	No. 3	No. 4
New York City	6.50	6.50	6.50
Albany, N. Y.	6.50	6.50	6.00
Rochester, N. Y.	7.50	7.50	7.50
Boston, Mass.	6.00	6.00	6.00
Bangor, Me.	6.75	6.75	6.75
Manchester, N. H.	6.50	6.50	6.50
Burlington, Vt.	7.5	7.5	7.5
Hartford, Conn.	6.00	6.00	6.00
New Haven, Conn.	6.00	6.00	6.00
Providence, R. I.	6.00	6.00	6.00

Note: Prices for No. 1 fuel in Socony-Vacuum territory same as for kerosine which see in tank wagon table for various cities; prices change with kerosine.

	No. 1	No. 2	No. 3	No. 4
ATLANTIC REFINING Cont'd				
Philadelphia, Pa.	7.75	6.00	6.00	6.00
Allentown, Pa.	8.50	6.50	6.50	6.50
Wilmington, Del.	7.75	6.00	6.00	6.00
Springfield, Mass.	7.5	6	—	6
Worcester, Mass.	7.5	6.00	....	6.00
Hartford, Conn.	7.00	6.00	—	6.00
S. O. OHIO				
Columbus Division and Cleveland	7.50	7.50	7.00	....
City of Lima	8.00	8.00	7.00	....
Rest of Ohio	8.00	8.00	7.50	....

Note: S. O. Ohio prices are for full compartment hose dumps, bucket dumps are 0.5c per gallon higher.

S. O. INDIANA

Stanolex Fuel and Furnace Oils

	No. 1 Fuel	Stanolex Furnace
Chicago	(a)6.5	6.5
Indianapolis	...	(b)7.8
Detroit	...	7.1
Milwaukee	8.4	7.7
Minneapolis	7.8	7.8
St. Louis	7.7	(c)6.7
Kansas City	6.8	6.8

(a) For 400 gals. and over; 150 to 399 gals., 7c; 1 to 149 gals., 8c.
(b) Excluding 4c state tax.
(c) For 400 gals. & over; 100 to 399 gals., 7c; 1 to 99 gals., 8c.

Note: Small-lot deliveries of light fuel oils range up to 2c higher than above quotations.

SEABOARD MARKETS, EXPORT AND COASTWISE

All prices on this page are publisher's opinion of open market quotations or sales, for spot shipment (10 to 15 days). In cargo markets, spot shipment is 90 days. Prices in cents per gallon, except heavy fuel oil in dollars per barrel, in tank car lots, f.o.b. refineries or seaboard terminals in districts designated, unless otherwise noted. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude. Unless otherwise noted, gasoline octane ratings are determined by C.F.R. Motor method, A.S.T.M. D-357-33T; and lubricating oil specifications determined according to A.S.T.M. methods, unless otherwise noted.

Eastern Domestic

(Inter-refinery and export prices not included.)

MOTOR GASOLINE

Prices Effective	Jan. 16	
District:	(a)60-64 Oct.	(a) 65 Oct. & Above
N. Y. harbor	6.00 – 6.25	6.00 – 6.50
(b)N. Y. harbor	5.75 – 6.00	5.75 – 6.25
Philadelphia	6.00 – 6.50	6.00 – 6.50
Baltimore	6.00 – 6.50	6.00 – 6.50
Norfolk	6.50 – 7.00	6.50 – 7.00
Wilmington, N. C.	6.50 – 7.00	6.50 – 7.00
Charleston, S. C.	6.50 – 7.00	6.50 – 7.00
Savannah	6.50 – 7.00	6.50 – 7.00
Jacksonville	6.00 – 7.00	6.50 – 7.00
Portland	6.75 – 7.00	6.75 – 7.00
Boston	6.00 – 6.50	6.25 – 6.50
Providence	6.00 – 6.50	6.25 – 6.50

WATER WHITE KEROSINE

N. Y. harbor	4.75 – 5.00	Charleston	5.00–5.25
(b)N. Y. harbor	4.625– 4.875	Savannah	5.00–5.25
Philadelphia	4.75–5.00	Jacksonville	5.00–5.25
Baltimore	5.00–5.25	Portland	5.60
Norfolk	5.00–5.25	Boston	4.75 –5.00
Wilmington, N.C.	5.00–5.25	Providence	4.75 –5.00

(c)FUEL OILS

	N. Y. harb.	N. Y. harb. barges
No. 1	4.75 – 5.00	4.625– 4.875
Nos. 2-3	4.25	4.125
No. 4	4.00 – 4.25	3.875– 4.125
No. 5	(s)$1.15	.....
No. 6	$0.95	.....
	Phila. dist.	**Balt. dist.**
No. 1	4.75 – 5.00	5.00 – 5.25
Nos. 2-3	4.25	4.25
No. 4	4.00 – 4.25	4.00 – 4.25
No. 5	$1.15	$1.15
No. 6	$0.95	$0.95
	Bost. dist.	**Prov. dist.**
No. 1	4.75 – 5.00	4.75 – 5.00
Nos. 2-3	4.25 – 4.50	4.25 – 4.50
No. 4	4.125– 4.50	4.125– 4.50
No. 5	$1.25	$1.15
No. 6	$0.95	$0.95

District:	(d)Bunker C Fuel	(d)Diesel Oil
N. Y. harbor	(f)$0.95	(g)$1.75
Philadelphia	(f)$0.95	(g)$1.75
Baltimore	(f)$0.95	(g)$1.75
Norfolk	(e)$0.95	$1.75
Charleston	$0.90	$1.75
Savannah	(e)$0.90	$1.785
Jacksonville	(e)$0.90	$1.785
Tampa	(e)$0.85	$1.785
Portland	$1.05	$1.85
Boston	(f)$0.95	(g)$1.75
Providence	$0.95	$1.75

	Gas Oil 28-34 Gravity	Diesel Oil Shore Plants
N. Y. harbor	4.00 – 4.25	4.00 – 4.25
Philadelphia dist.	4.25	....
Baltimore dist.	4.25	....
Norfolk dist.	4.25	....
Savannah dist.	....	4.25
Jacksonville dist.	....	4.25

Pacific Export

(l) (Quotations are at seaboard, Los Angeles, in cargo lots, cents per gal., except where otherwise noted.)

Prices Effective	Jan. 16	Jan. 9
U. S. Motor, under 65 oct.	4.625– 4.75	4.625– 4.75
400 e.p. blend, under 65 oct.	4.75 – 4.875	4.75 – 4.875
400 e.p. blend 65 oct. & above	4.875– 5.00	4.875– 5.00
(h) 38-40 gravity, w.w. kerosine	4.25 – 4.75	4.25 – 4.75
41-43 gravity, w.w. kerosine	4.75 – 5.00	4.75 – 5.00
44 gravity, w.w. kerosine	5.25 – 5.50	5.25 – 5.50
In Cargo lots, per bbl.		
Diesel fuel, 24° & above	$1.05 –$1.20	$1.05 –$1.20
Diesel fuel, under 24°	$0.875–$1.05	$0.87 –$1.05
(j) 30-34 gravity, diesel (gas oil)	$1.25 –$1.30	$1.25 –$1.30
(k)Grade C fuel oil	$0.60 –$0.70	$0.60 –$0.70

Prices Effective	Jan. 16	Jan. 9
In Ships' Bunkers, or deep tank lots, per bbl.:		
(j)Diesel fuel oil	$1.35 –$1.55	$1.35 –$1.55
(k)Grade C fuel oil	$0.70 –$0.90	$0.70 –$0.90
Cased Goods: (Per case)		
U. S. Motor	$1.40 –$1.50	$1.40 –$1.50
400 e.p. blend, under 65 octane	$1.50 –$1.60	$1.50 –$1.60
375–400 e.p. blend, 65 oct. & above	$1.60 –$1.70	$1.60 –$1.70
(h) 40-43 gravity, w.w. kerosine	$1.30 –$1.40	$1.30 –$1.40
Kerosine, p.w.	$1.25 –$1.35	$1.25 –$1.35

New York Export

(Cents per gal. in bbls. F.a.s. New York)

CYLINDER OILS (Pennsylvania Products)

Bright stock:		
Light, 25 p.t.	21.50	21.50
Neutral oil:		
200 3 color, 25 p.t.	22.50	22.50
150 3 color, 25 p.t.	20.50	20.50
600 s.r., unfiltered	15.50	15.50
650 s.r., unfiltered	16.50	16.50
600 fl., s.r.	17.50	17.50
630 fl., s.r.	20.50	20.50

Wax, Domestic *and* Export

(A.S.T.M. Tests. Melting points, however, are A.M.P., 3° higher than E.M.P. Export prices, f.a.s., carloads. Domestic prices, f.o.b. refineries in New Orleans & New York districts in bags, carloads, with 0.2c discount allowed for shipment in bulk, except where noted below. Scale solid; fully refined, slabs in bags)

Prices Effective	Jan. 16	
	New York	
	Domestic	Export
124-6 Y.C. scale	2.40 – 2.50	2.40 – 2.50
122-4 W.C. scale	2.40 – 2.50	2.40 – 2.50
124-6 W.C. scale	2.40 – 2.50	2.40 – 2.50
123-5 Fully rfd.	3.75	3.375
125-7 Fully rfd.	3.90	3.50 – 3.625
128-30 Fully rfd.	(l)4.00	3.65 – 3.75
130-2 Fully rfd.	(l)4.35	4.00
133-5 Fully rfd.	(l)4.65	4.40 – 4.50
135-7 Fully rfd.	(l)4.90	5.00 – 5.125
	New Orleans	
	Domestic	Export
124-6 Y.C. scale	2.40 – 2.50	2.40 – 2.50
122-4 W.C. scale	2.30 – 2.50	2.30 – 2.50
124-6 W.C. scale	2.40 – 2.50	2.40 – 2.50
123-5 Fully rfd.	3.75	3.375
125-7 Fully rfd.	3.90	3.50 – 3.625
128-30 Fully rfd.	(l)4.00	3.65 – 3.75
130-2 Fully rfd.	(l)4.35	4.00
133-5 Fully rfd.	(l)4.65	4.40 – 4.50

Gulf Coast

(F.o.b. ship, Gulf oil terminals; minimum 20,000 bbls.; representing traders' opinions)

Prices Effective	Jan. 16	Jan. 9
For Domestic shipment:		
MOTOR GASOLINE		
59 oct. & below	4.375– 4.50	4.375– 4.50
60-64 oct.	4.375– 4.625	4.375– 4.625
65-67 octane	4.50 – 4.875	4.50 – 4.875
68-70 octane	4.875– 5.125	4.875– 5.125
FUEL OILS		
No. 1	3.625– 4.00	3.625– 4.00
No. 2	3.375– 3.625	3.375– 3.625
KEROSINE		
41-43 gravity, w.w.	3.875– 4.125	3.875– 4.125

For Export Shipment:	Jan. 16	Jan. 9
GASOLINE		
U. S. Motor Gasoline, no octane guarantee	(a)4.25	(a)4.25

	Jan. 16		
Gasoline:	60-62 Gravity, 400 e.p.	61-63 Gravity, 390 e.p.	64-66 Gravity, 375 e.p.
60 octane	4.375– 4.50	4.375– 4.50	4.375– 4.50
61 octane	4.375– 4.55	4.375– 4.55	4.375– 4.55
62 octane	4.375– 4.60	4.375– 4.60	4.375– 4.60
63 octane	4.375– 4.65	4.375– 4.65	4.375– 4.65
64 octane	4.375– 4.70	4.375– 4.70	4.375– 4.70
65 octane	4.50 – 4.75	4.50 – 4.75	4.625– 4.75
66 octane	4.625– 4.875	4.625– 4.875	4.625– 4.875
67 octane	4.625– 5.00	4.625– 5.00	4.625– 5.00
68 octane	4.875– 5.125	4.875– 5.125	4.875– 5.125
69 octane	(n)	(n)	(n)
70 octane	5.00–5.50	5.00 – 5.50	5.00 – 5.50
71 octane	(n)	(n)	(n)

Prices Effective	Jan. 16	Jan. 9
For Export Shipment:		
KEROSINE		
44 gravity, w.w.	(a) 4.125–4.25	(a)4.125–4.25
41-43 gravity, w.w.	3.875– 4.125	3.875– 4.125
41-43 gravity, p.w.	3.875– 4.125	3.875– 4.125
GAS AND BUNKER OILS		
For Export Shipment		
Gas Oil (m):		
Below 43 diesel index	3.375– 3.50	3.375– 3.50
43-47 diesel index	3.50 – 3.625	3.50 – 3.625
48-52 diesel index	3.50 – 3.625	3.50 – 3.625
53-57 diesel index	3.625– 3.75	3.625– 3.75
58 & above	3.625– 3.875	3.625– 3.875
For Domestic or Export Shipment		
Diesel Oil Ship's bkrs.	(o)$1.55	(o)$1.55
Grade C bunker oil for ship's bunkers	(o)$0.75	(o)$0.75
Grade C bunker oil, in cargoes	$0.675–$0.70	$0.675–$0.70

MID-CONTINENT LUBRICATING OILS

(Cents per gal. at Gulf; in bbls., f.a.s.; n bulk, f.o.b. terminals)

	Jan. 16	
	(p)Barrels	Bulk
190-200 vis. D. 210 brt. stock	21.50 –22.50	17.60 –17.80
150-160 vis. D 210 brt. stock:		
0-10 p.p.	18.00 –18.25	13.00 –14.30
10-25 p.p.	17.50 –17.75	12.50 –14.25
150-160 vis. E 210 brt. stock	17.25 –17.50	13.00 –14.50
120 vis. D 210 brt. stock	17.25 –17.50	13.00 –14.50

	Jan. 16	Jan. 9
180 vis. No. 3 color neutral:	Bulk	Bulk
0-10 p.p.	9.80 –10.50	9.80 –10.50
15-30 p.p.	9.50 –10.00	9.50 –10.00
200 vis. No. 3 color neutral:		
0-10 p.p.	10.30 –10.50	10.30 –10.50
15-30 p.p.	9.50 –10.00	9.50 –10.00
600 s.r. olive green	9.00 –11.25	9.00 –11.25
600 s.r. dark green	7.00 – 9.25	7.00 – 9.25

SOUTH TEXAS LUBRICATING OILS

(Vis. at 100° cold test 0, bulk export shipment, f.o.b. terminals.)

Unfiltered Pale Oils:		
Vis. Color		
100 No. 3	4.50 – 4.75	4.50 – 4.75
200 No. 3	6.00 – 6.25	6.00 – 6.25
300 No. 3	6.50 – 6.75	6.50 – 6.75
500 No. 3½	7.50	7.50
750 No. 4	8.00 – 8.25	8.00 – 8.25
1200 No. 4	8.375– 8.75	8.375– 8.75
2000 No. 4	8.50 – 9.00	8.50 – 9.00
Red Oils:		
Vis. Color		
100 No. 5-6	4.50 – 4.75	4.50 – 4.75
200 No. 5-6	6.00 – 6.25	6.00 – 6.25
300 No. 5-6	6.50 – 6.75	6.50 – 6.75
500 No. 5-6	7.50	7.50
750 No. 5-6	8.00 – 8.25	8.00 – 8.25
1200 No. 5-6	8.375– 8.75	8.375– 8.75
2000 No. 5-6	8.50 – 9.00	8.50 – 9.00

Note: Red oil prices cover oils with green cast; prices for blue cast red oils are slightly lower in some cases.

Tanker Rates

(Approximate freight rates to Continental ports shillings per ton of 2240 lbs., British sterling: U. S. ports cents per bbl.)

Rates Effective Jan. 16

	Crude & /or Fuel		Refined Oil & /or Spirits	
	Last Paid	Owners Ask	Last Paid	Owners Ask
Gulf-U.K./Cont.(q)	10/6	10/3-10/9	10/9	10/6-11/6
Aruba-U.K./Cont.(q)	9/	9/-9/6	10/	9/3-9/6
Gulf-N. Atlantic (r) (not E. of N.Y.): Hvy. Crude & fuel, (10 to 19.9 gravity)	21c	21c	....	....
Light Crude, (30 Grav. or Lighter)	19c	19c	....	....
Gasoline	....	....	20c	21c
Kerosine	....	....	21c	22c
Light Fuel	....	....	22c	23c

(a) Prices nominal. (b) In barge lots. (c) Fuel oils meet specifications of U. S. Commercial Standards CS12-35. (d) In ships' bunkers. (e) For barging, add 5c per bbl. (f) For barging, add 5c to 6c per bbl. (g) For barging, add 6.5c to 7.5c per bbl. (h) 150 fire point. (i) For San Francisco cargo prices, add 5c per bbl. to cargo prices shown above. (j) Pacific Specification 200. (k) Pacific Specification 400. (l) Shipment either in bags or in bulk. (m) Less than ½ of 1% sulfur. (n) No prices reported. (o) Barging 5c per bbl. additional at some Gulf ports. (p) Second-hand barrels. (q) Continental ports in range between Bordeaux and Hamburg, both inclusive. (r) Venezuela loading, same rate; Tampico, 2c to 3c per bbl. additional. (s) Low pour test, low viscosity, No. 5 generally quoted at $1.25.

CRUDE OIL MARKETS

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a. m. of dates as given

EASTERN FIELDS

Posted by Joseph Seep Purchasing Agency

(Effective Sept. 1, 1938, except Corning Oct. 18, 1938)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$1.34
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$1.28
Penna. Grade Oil in Buckeye Pipe Lines (Mackaburg, O.).....$1.18
Corning Oil in Buckeye Pipe Lines (Ohio)...$0.97

Posted by Other Companies

Tide Water Associated Oil Co.
Bradford-Allegany district (Penna. and N. Y.) (Effective Sept. 1, 1938).....$1.68
*The Pennzoil Co.: (Effective Sept. 1, 1938)
Penna. Grade Oil in National Transit Lines*$1.61
*The Pennzoil Co. posts $1.61 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other lower districts range down to $1.56 per bbl. at well.

MICHIGAN

Posted by Pure Oil Co.

Midland, Midland County (Oct. 14, 1938)...$0.925

Posted by Simrall Corp.

(Effective Jan. 6, 1939)

Crystal, Greendale, Porter and equal grades..$0.925
Beaverton, Buckeye, Bentley, Edenville....$0.90
Freeman.....$0.82

(Effective Dec. 13, 1938)

West Branch, Arenac, and equal grades....$0.70

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

(Effective Oct. 13, 1938)

Illinois and Princeton.....$1.05
Illinois Basin.....$1.15
Owensboro, (Western Ky.).....$1.10
Lima, O.....$0.90

Posted by Sohio Corp.

Illinois Basin:
Beecher City (Effective Oct. 13, 1938).....$1.15
Centralia Field:
Congested District (Effective Oct. 1, 1938).$1.15
Area Outside Congested District (Effective Oct. 13, 1938).....$1.15

Posted by Carter Oil Co.

(Effective Oct. 14, 1938)

Louden, Fayette County, Ill.....$1.15

Posted by Ashland Oil & Transportation Co.

(Effective Oct. 14, 1938)

Somerset Oil in Ashland Lines, Kentucky:
Big Sandy River.....$1.12
Kentucky River.....$1.20

Posted by Stoll Oil Refining Co.

(Effective Nov. 10, 1938)

Stoll Pipe Line Oil (Ky.).....$1.00

Posted by Fordsville Gathering Line, Inc.

(Effective Dec. 24, 1938)

Birk City Field, Ky.....$1.05

(Effective Oct. 13, 1938)

Owensboro District, Ky..... 1.10

CANADIAN FIELDS

Posted by Imperial Oil Limited

Western Ontario

(Effective Oct. 25, 1938)

Petrolia.....$1.90
Oil Springs.....$1.97

Alberta—Turner Valley

(Prices f.o.b. field tankage)

(Effective Jan. 5, 1938)

Crude Oil

40-40.9°	$1.14	53-53.9	$1.40
41-41.9	1.16	54-54.9	1.42
42-42.9	1.18	55-55.9	1.44
43-43.9	1.20	56-56.9	1.46
44-44.9	1.22	57-57.9	1.48
45-45.9	1.24	58-58.9	1.50
46-46.9	1.26	59-59.9	1.52
47-47.9	1.28	60-60.9	1.54
48-48.9	1.30	61-61.9	1.56
49-49.9	1.32	62-62.9	1.58
50-50.9	1.34	63-63.9	1.60
51-51.9	1.36	64-64.9	1.62
52-52.9	1.38		

Crude Naphtha, 65 grav. & above.....$2.14

Absorption Gasoline

90% Rec., 20 lb. Reid v.p.....$1.94
90% Rec., 17 lb. Reid v.p.....$2.08

MID-CONTINENT

Oklahoma-Kansas

*(Effective Oct. 11 to 22, 1938)

	S. O. Indiana	Carter Oil Magnolia Sinclair Shell	Continental Texas Co.
Below 21°.	$0.70	$0.60	....
21-21.9	.72	.63	....
22-22.9	.74	.66	....
23-23.9	.76	.69	....
24-24.9	.78	.72	....
25-25.9	.80	.75	....
26-26.9	.82	.78	....
27-27.9	.84	.81	....
28-28.9	.86	.84	$0.86
29-29.9	.88	.87	.88
30-30.9	.90	.90	.90
31-31.9	.92	.92	.92
32-32.9	.94	.94	.94
33-33.9	.96	.96	.96
34-34.9	.98	.98	.98
35-35.9	1.00	1.00	1.00
36-36.9	1.02	1.02	1.02
37-37.9	1.04	1.04	1.04
38-38.9	1.06	1.06	1.06
39-39.9	1.08	1.08	1.08
40 & above	1.10	1.10	1.10

*Effective by Carter Oil, Oct. 13, posting in Okla. only; Continental Oil, Oct. 11, with lowest grade below 29; Magnolia, Oct. 12, posting in Okla. only; Shell, Oct. 22; Sinclair-Prairie, Oct. 14, with lowest grade 21-21.9; S. O. Indiana, Oct. 17; The Texas Co., Oct. 12.

North-North Central and Central Texas

*Effective 1938:	Stanolind Oct. 17	Sinclair-Prairie Oct. 11	*Texas Co. *Continental *Magnolia
Below 21°.	$0.60	....	....
21-21.9	.62	....	....
22-22.9	.64	....	....
23-23.9	.66	....	....
24-24.9	.68	$0.76	$0.79
25-25.9	.70	for	for
26-26.9	.72	oil	oil
27-27.9	.74	below	below
28-28.9	.76	29°.	29°.
29-29.9	.78	.78	.81
30-30.9	.80	.80	.83
31-31.9	.82	.82	.85
32-32.9	.84	.84	.87
33-33.9	.86	.86	.89
34-34.9	.88	.88	.91
35-35.9	.90	.90	.93
36-36.9	.92	.92	.95
37-37.9	.94	.94	.97
38-38.9	.96	.96	.99
39-39.9	.98	.98	1.01
40 & above.	1.00	1.00	1.03

*Effective Oct. 11, by Continental, in North Tex.; Oct. 12, by Texas Co. in North & North Central Texas. Texas Co.'s lowest grade is 28-28.9, at $0.79; by Magnolia, Dec. 3, in N. and N. Central Texas

Jefferson County, Texas

Posted by Magnolia Petroleum Co.

Beaumont

(Effective Oct. 12, 1938)

Below 20°.	$0.79	30-30.9	$1.08
20-20.9	0.82	31-31.9	1.10
21-21.9	0.85	32-32.9	1.12
22-22.9	0.88	33-33.9	1.14
23-23.9	0.91	34-34.9	1.16
24-24.9	0.94	35-35.9	1.18
25-25.9	0.97	36-36.9	1.20
26-26.9	1.00	37-37.9	1.22
27-27.9	1.02	38-38.9	1.24
28-28.9	1.04	39-39.9	1.26
29-29.9	1.06	40 & above	1.28

*For below 21°.

Oct. 11, '38, Stanolind Oil & Gas Co. posted same gravity and price schedule in West Beaumont field as Magnolia.

TEXAS FIELDS

Posted by Humble Oil & Refining Co.

(*West Central Texas)

(Effective Dec. 3, 1938)

24-24.9	$0.71	33-33.9	$0.89
25-25.9	.73	34-34.9	.91
26-26.9	.75	35-35.9	.93
27-27.9	.77	36-36.9	.95
28-28.9	.79	37-37.9	.97
29-29.9	.81	38-38.9	.99
30-30.9	.83	39-39.9	1.01
31-31.9	.85	40 & above	1.03
32-32.9	.87		

*Includes Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Shackelford, Stephens, Throckmorton and Young counties.

Note: Effective Oct. 1, 1937, Humble prices are based on 100% tank tables at 60F.

East Central Texas

(Effective Oct. 11, 1938)

23-23.9	$0.78	32-32.9	$ .96
24-24.9	.80	33-33.9	.98
25-25.9	.82	34-34.9	1.00
26-26.9	.84	35-35.9	1.02
27-27.9	.86	36-36.9	1.04
28-28.9	.88	37-37.9	1.06
29-29.9	.90	38-38.9	1.08
30-30.9	.92	39-39.9	1.10
31-31.9	.94	40 and above	1.12

*Including Anderson, Cherokee, Limestone, Navarro counties.

PANHANDLE TEXAS

Posted by Humble Oil & Refining Co.

(Effective Dec. 3, 1938)

	Gray County	Carson-Hutchinson
28-28.9	0.72	$0.67
29-29.9	0.74	0.69
30-30.9	0.76	0.71
31-31.9	0.78	0.73
32-32.9	0.80	0.75
33-33.9	0.82	0.77
34-34.9	0.84	0.79
35-35.9	0.86	0.81
36-36.9	0.88	0.83
37-37.9	0.90	0.85
38-38.9	0.92	0.87
39-39.9	0.94	0.89
40 & above	0.96	0.91

Effective Dec. 3, 1938, above Panhandle prices met by Magnolia.

EAST TEXAS

(Effective *Oct. 11, 12, 13, 1938)

Gulf, Humble, Magnolia, Stanolind, Texas Co., Tide-Water Associated.....$1.10
*Effective Oct. 11 by Humble and Stanolind; Oct. 12 Magnolia, Texas, Tide Water; Oct. 13 by Gulf.

Shell also posted on Oct. 11, 1938, in Livingston area, Polk County, Texas, $1.10.

NORTHEAST TEXAS

(Posted by Humble, Oct. 11, 1938)

Talco.....$0.55

(Posted by Magnolia, Oct. 12, 1938)

Cass County and Panola County, Tex.:
Same gravity and price schedule as S. O. Louisiana posts for N. La.-Ark. Crude, which see under that company.

(Posted by The Texas Co., Oct. 12, 1938)

Cass County.....$1.05

WEST TEXAS AND NEW MEXICO

Posted by Humble Oil & Refining Co.

(Effective Oct. 11. 1938)

(Including Andrews, Crane, Crockett, Ector, *Gaines, Glasscock, Howard, *Reagan, Upton, Winkler and *Yoakum Counties, Texas and Lea county, New Mexico).

Below 20.	$0.53	30-30.9	$0.75
20-20.9	.55	31-31.9	.77
21-21.9	.57	32-32.9	.79
22-22.9	.59	33-33.9	.81
23-23.9	.61	34-34.9	.83
24-24.9	.63	35-35.9	.85
25-25.9	.65	36-36.9	.87
26-26.9	.67	37-37.9	.89
27-27.9	.69	38-38.9	.91
28-28.9	.71	39-39.9	.93
29-29.9	.73	40 & above	.95

Pecos, West Texas.....$0.78

*Added to this posting, Aug. 29, 1938.

Oct. 12, '38, Magnolia met Humble in Crane, Glasscock, Howard, Mitchell, Upton and Winkler counties, except that its lowest grade is below 25 at $0.63.

Oct. 11, '38, Shell Petroleum met Humble in Crane, Ector, Glasscock, Howard, Upton and Winkler counties, Tex., and Lea county, N. M., except that its highest grade is 36 & above, at $0.87. It met Humble in Pecos, and in Pecos county Yates shallow pool, posted $0.65.

Oct. 11, '38, Stanolind Oil & Gas Co. met Humble in Hendrick field, Winkler, except that its lowest grade is below 26 at $0.65.

Oct. 12, '38, The Texas Co. posted in Ward and Winkler counties, Tex., and Lea county, N. M., same prices as Humble in West Texas, except that its lowest grade is below 26, at $0.65, and its highest grade, 36 and above, at $0.87.

Posted by Continental Oil Co.

(Effective Oct. 11, 1938)

Artesia, Jackson and Maljamar pools, New Mexico: gravity schedule beginning with below 29, at $0.61; 29-29.9, at $0.63; plus 2c differential for each gravity, up to 40 & above, at $0.85.

COLORADO

Posted by Continental Oil Co.

(Effective Oct. 11. 1938)

Ft. Collins and Wellington

Below 29.	$0.81	35-35.9	$0.95
29-29.9	.83	36-36.9	.97
30-30.9	.85	37-37.9	.99
31-31.9	.87	38-38.9	1.01
32-32.9	.89	39-39.9	1.03
33-33.9	.91	40 & above	1.05
34-34.9	.93		

Canon City and Florence, Col.....$0.90

SOUTH AND SOUTHWEST TEXAS

All Shown Below Posted by Humble Oil & Refining Co.

(Effective Oct. 11, 1938)

Carroll, Clark, Darst Creek, Hilbig, Salt Flat and Zoboroski crudes.....$0.96
Van crude.....$0.93
Conroe.....$1.27

(Effective Dec. 3, 1938)

Flour Bluff.....$1.23

Oct. 12, '38, Magnolia met Humble in Darst Creek; posted $0.87 in Luling; $0.99 in Lytton Springs; $1.14 for Cleveland, and $1.02 in Hardin, both in Liberty county, Tex.

Oct. 12, '38, The Texas Co. met Humble in Darst Creek.

Anahuac and Dickinson

(Effective Dec. 3, 1938)

Below 20°	$0.74	30-30.9	$1.03
20-20.9	.77	31-31.9	1.05
21-21.9	.80	32-32.9	1.07
22-22.9	.83	33-33.9	1.09
23-23.9	.86	34-34.9	1.11
24-24.9	.89	35-35.9	1.13
25-25.9	.92	36-36.9	1.15
26-26.9	.95	37-37.9	1.17
27-27.9	.97	38-38.9	1.19
28-28.9	.99	39-39.9	1.21
29-29.9	1.01	40 & above	1.23

*Includes Cedar Point, Fairbanks, Gillock, Hull, Pierce Junction and Raccoon Bend (shallow sand).

Raccoon Bend (Deep sand crude) Tomball and Satsuma

(Effective Dec. 3, 1938)

22-22.9	$0.95	32-32.9	$1.15
23-23.9	.97	33-33.9	1.17
24-24.9	.99	34-34.9	1.19
25-25.9	1.01	35-35.9	1.21
26-26.9	1.03	36-36.9	1.23
27-27.9	1.05	37-37.9	1.25
28-28.9	1.07	38-38.9	1.27
29-29.9	1.09	39-39.9	1.29
30-30.9	1.11	40 & above	1.31
31-31.9	1.13		

Dec. 3, Magnolia met above price and gravity schedule in Tomball.

(Continued on next page)

CRUDE OIL MARKETS (Continued from preceding page)

Posted by Humble

***Mirando**

(Effective Dec. 3, 1938)

Below 20°	$0.74	30-30.9	$1.03
20-20.9	.77	31-31.9	1.05
21-21.9	.80	32-32.9	1.07
22-22.9	.83	33-33.9	1.09
23-23.9	.86	34-34.9	1.11
24-24.9	.89	35-35.9	1.13
25-25.9	.92	36-36.9	1.15
26-26.9	.95	37-37.9	1.17
27-27.9	.97	38-38.9	1.19
28-28.9	.99	39-39.9	1.21
29-29.9	1.01	40 & above	1.23

*Includes Duval, Jim Hogg, Jim Wells, Webb and Zapata counties, Tex. and Heyser and Placedo crudes.

Oct. 12, '38, Texas Co. posted for Duval-Mirando, $0.77 for below 21, plus 3c differential to 26-26.9, $0.95; 27-27.9, $0.97; 28 & above, $0.99.

Dec. 3, Humble's Mirando schedule met by Magnolia.

LOUISIANA-ARKANSAS

Posted by Standard Oil Co. of Louisiana

(Effective Oct. 5 1938)

	*N. La.-Ark.	†Columbia County, Ark.	‡South Louisiana
Below 21°	$0.73	$0.66	$0.74
21-21.9	for	for	.77
22-22.9	oil	oil	.80
23-23.9	Below	Below	.83
24-24.9	25°	25°	.86
25-25.9	$0.75	$0.68	.89
26-26.9	.77	.70	.92
27-27.9	.79	.72	.94
28-28.9	.81	.74	.96
29-29.9	.83	.76	.98
30-30.9	.85	.78	1.00
31-31.9	.87	.80	1.02
32-32.9	.89	.82	1.04
33-33.9	.91	.84	1.06
34-34.9	.93	.86	1.08
35-35.9	.95	.88	1.10
36-36.9	.97	.90	1.12
37-37.9	.99	.92	1.14
38-38.9	1.01	.94	1.16
39-39.9	1.03	.96	1.18
40 & above	1.05	.98	1.20

(Effective Oct. 5, 1938)

Smackover, Ark	$0.73
Urania, La. (Ark. Fuel Oil Co., Jan. 28, '37)	$1.02

*Includes Bunkie, Caddo, Carterville, DeSoto, Homer, Haynesville, Rodessa, Sabine and Sarepta, in N. La.; El Dorado and Miller County, Ark. (latter is Ark. part of Rodessa field).

Note: S. O. Louisiana prices in all La.-Ark. fields, effective Oct. 5, 1938, are on 100% tank table basis.

†Includes Buckner, Magnolia, and Village pools.

‡Includes these fields: Baton Rouge, Bayou, Choctaw, Cheneyville, Darrow, Jeanerette, Lirette, N. Crowley and Roanoke.

Posted by Continental Oil Co.

(Effective Oct. 11, 1938)

Tepetate and Ville Platte, La.	$1.03
Abbeville, La.	$1.01

Oct. 12, 1938, Magnolia Petroleum and The Texas Co. posted same gravity and price schedule as S. O. La. posts in N. La.-Ark. in these fields: Magnolia, in Bull Bayou, Cotton Valley, Haynesville, Pine Island, and Rodessa, La., and Eldorado and Rainbow, Ark.; Texas Co. in N. La. Both also met S. O. La. in Smackover. Texas Co. posted $1.24 for Garden Island, La. and $1.04 for Lafitte, La.

*GULF COASTAL FIELDS

Posted by Humble Oil & Refining Co.

†(Effective Oct. 11, 1938)

Below 20	$0.79	30-30.9	$1.08
20-20.9	.82	31-31.9	1.10
21-21.9	.85	32-32.9	1.12
22-22.9	.88	33-33.9	1.14
23-23.9	.91	34-34.9	1.16
24-24.9	.94	35-35.9	1.18
25-25.9	.97	36-36.9	1.20
26-26.9	1.00	37-37.9	1.22
27-27.9	1.02	38-38.9	1.24
28-28.9	1.04	39-39.9	1.26
29-29.9	1.06	40 & above	1.28

†Effective Dec. 3, 1938, gravities up to 45 & above discontinued in Refugio, Saxet, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.

*Humble's prices apply in these Texas fields: Amelia, Clear Lake, Goose Creek, Mykawa, Sugarland, Thompsons, Webster and West Columbia; also Refugio, Saxet, Greta, O'Connor-McFadden, Taft, Plymouth and Tom O'Connor fields.

Oct. 11, 1938, Stanolind posted in Clinton, Hastings, High Island, So. Houston, and Spindletop, same prices as Humble in Texas Gulf Coast fields, except that Stanolind's lowest grade is below 21, at $0.82.

Oct. 12, 1938, The Texas Co. posted for Texas & La. Gulf Coast crude: $0.82 for below 21, plus 3c to 26-26.9, which is $1; from there on, 2c, to 34 & above, which is $1.16. In Refugio, same as other Gulf Coast, except highest gravity is 28 & above, $1.04.

ROCKY MOUNTAIN FIELDS

Posted by Stanolind Oil & Gas Co.

(Effective Oct. 11, 1938)

Salt Creek, (except Tensleep crude), Midway and Dutton Creek, Wyo., same schedule as Stanolind posts in Oklahoma-Kansas, ranging from $0.86 to $1.10, which see under Mid-Continent crude on previous page.

Tensleep, Salt Creek field	$0.646
Iles, light, Col.	0.98
Iles, heavy	0.92
Elk Basin, light	0.90
Grass Creek, light	0.90
Frannie light	0.55
Grass Creek, heavy	0.40
Hamilton Dome, Wyo.	0.35
Frannie heavy	0.42

Posted by Ohio Oil Co.

(Effective Oct. 11, 1938)

Elk Basin, Wyo.	$0.90
Grass Creek, light	0.90
Rock Creek	1.00
Lance Creek	0.77
Dry Creek, Mont.	0.92

(Effective May 1, 1938)

Grass Creek heavy	$0.50

(Effective Nov. 16, 1937)

Sunburst, Mont.	$0.90

Posted by Continental Oil Co.

(Effective Oct. 11, 1938)

Cat Creek, Mont.	$1.10
Big Muddy, Wyo.	0.98
Lance Creek, Wyo.	0.77

CALIFORNIA, *Posted by Standard Oil of California*

All gravities above those quoted take highest price offered in the field. Prices effective Feb. 26, 1936, except Huntington Beach, Playa del Rey, Santa Fe Springs, Kern Front, Signal Hill (Long Beach) effective March 7, 1936; Elk Hills effective June 22, 1936; Lakeview Area, Aug. 19, 1936; El Segundo and Wilmington, Oct. 15, 1937; Greeley-Canal, July 9, 1938; Santa Maria Valley, by Union Oil, Oct. 15, 1938.

Gravity	Signal Hill (Long Beach) El Segundo †Wilmington	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda Brea Canon	Athens Rosecrans	Dominguez	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	‡Newhall and others	Mountain View	Elk Hills	Buena Vista Hills Midway-Sunset Lakeview Area	Greeley-Canal (Kern County)	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria (Union Oil)
13-13.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$0.63
14-14.9	$0.80	$0.79	$0.74	$0.78	$0.79	$0.80	$0.76	....	....	$0.80	$0.76	$0.76	$0.77	$0.78	....	$0.70	....	$0.70	$0.70	....	$0.70	$0.70	....	.65
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	.68
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.76	....	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	....	.70	....	.70	.70	....	.70	.70	....	....
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	....	.70	.70	.74	.74	....	.74	.71	.70	....
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	....	....	.70	.78	.78	....	.78	.72	.70	....
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	.78	....	.73	.82	.82	....	.82	.74	.70	....
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	....	.77	.87	.87	....	.86	.78	.72	....
23-23.9	.95	.86	.77	.96	.99	1.02	.96	.84	.79	.96	.88	.93	.82	.92	.78	....	.80	.92	.92	....	.90	.82	.76	....
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	.99	.91	.96	.85	.96	.82	....	.84	.97	.97	....	.94	.86	.79	....
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	1.02	.95	....	.89	.99	.86	....	.88	1.01	1.01	....	.98	.90	.83	....
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	1.05	.98	....	.92	1.03	.90	....	.91	1.06	1.06	....	1.02	....	....	....
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	1.02	....	.96	1.06	.95	....	.95	1.10	1.10	$0.91	1.06	....	....	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	1.06	....	.99	1.10	.99	....	.99	1.15	1.15	.94	1.10	....	....	....
29-29.9	1.17	1.15	.93	1.18	1.18	....	1.17	1.12	.93	....	1.09	....	1.03	1.14	1.03	....	1.02	1.20	1.20	.98	1.14	....	....	....
30-30.9	1.21	1.19	.95	1.22	1.21	....	1.21	1.17	.95	....	....	....	1.07	1.17	1.08	....	1.06	1.25	1.25	1.02	1.18	....	....	....
31-31.9					1.24		1.24	1.22	.97	....	....	....	1.11	1.21	1.12	....	1.09	1.29	1.29	1.06				....
32-32.9		*Elwood Terrace		....	1.27		1.27	1.27	1.00	....	....	....	1.14	1.25	1.16	....	1.13	1.34	1.34	1.09	Kettleman Hills			....
33-33.9	....	1.28	....	....	....		....	1.32	....	....	....	....	1.18	1.28	1.20	....	1.17	1.38	1.38	1.13	....	1.19	....	....
34-34.9	....	1.32	....	....	....		....	1.37	....	....	....	....	1.22	1.32	1.25	....	1.20	....	....	1.17	....	1.23	....	....
35-35.9	....	1.35	....	....	....		....	1.42	....	....	....	....	1.25	....	1.29	....	....	....	....	1.20	....	1.27	....	....
36-36.9	....	1.39	....	....	....		....	1.46	....	....	....	....	1.29	....	1.33	....	....	....	....	1.24	....	1.31	....	....
37-37.9	....	1.43	....	....	....		....	1.51	....	....	....	....	1.32	....	1.37	....	....	....	....	1.28	....	1.35	....	....
38-38.9	....	....	....	....	....		....	1.56	....	....	....	....	1.36	....	1.42	....	....	....	....	1.31	....	1.39	....	....
39-39.9	....	....	....	....	....		....	1.61	....	....	....	....	1.40	....	....	....	....	....	....	1.35	....	1.43	....	....
40-40.9	....	....	....	....	....	F. O. B. Standard Pipe Line	....	1.66	....	....	....	....	1.43	....	....	....	....	....	....	1.39	....	....	....	....
41-41.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.43	....	....	....	....
42-42.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.46	....	....	....	....
43-43.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.50	....	....	....	....
44-44.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.54	....	....	....	....
45-45.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.57	....	....	....	....
46-46.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.61	....	....	....	....
47-47.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.65	....	....	....	....
48-48.9	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	1.68	....	....	....	....

*F. o. b. ship.

‡Also McKittrick, Kern River. Kern Front and Round Mountain $0.70 thru 19.9 gravity; no higher gravity quoted.

†Wilmington prices differ on gravities below 18.9. Prices are: 14-16.9, $0.75; 17-17.9, $0.77; and 18-18.9, $0.79; rest of schedule same as Signal Hill.

SHALL LEAD THEM!"

Yes

Members of CAPTAIN MIDNIGHT'S FLIGHT PATROL

are Leading Their Parents into Skelly Stations to Establish New Records in Gasoline Gallonage

● Here is a typical member of Captain Midnight's Flight Patrol . . . one member of a five-night-a-week audience estimated at *650,000* listeners! This lad, and his innumerable brothers and sisters, make up a body of boosters whose efforts are reflected by mounting sales in every Skelly area.

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In every community served by Skelly there are enthusiastic groups who follow the radio adventures of Captain Midnight. They listen. They join Captain Midnight's Flight Patrol. And immediately they become factors in Skelly's masterful business-building plan. For each added member means more station traffic . . . more customers on the driveway . . . greater volume for the Skelly dealer!

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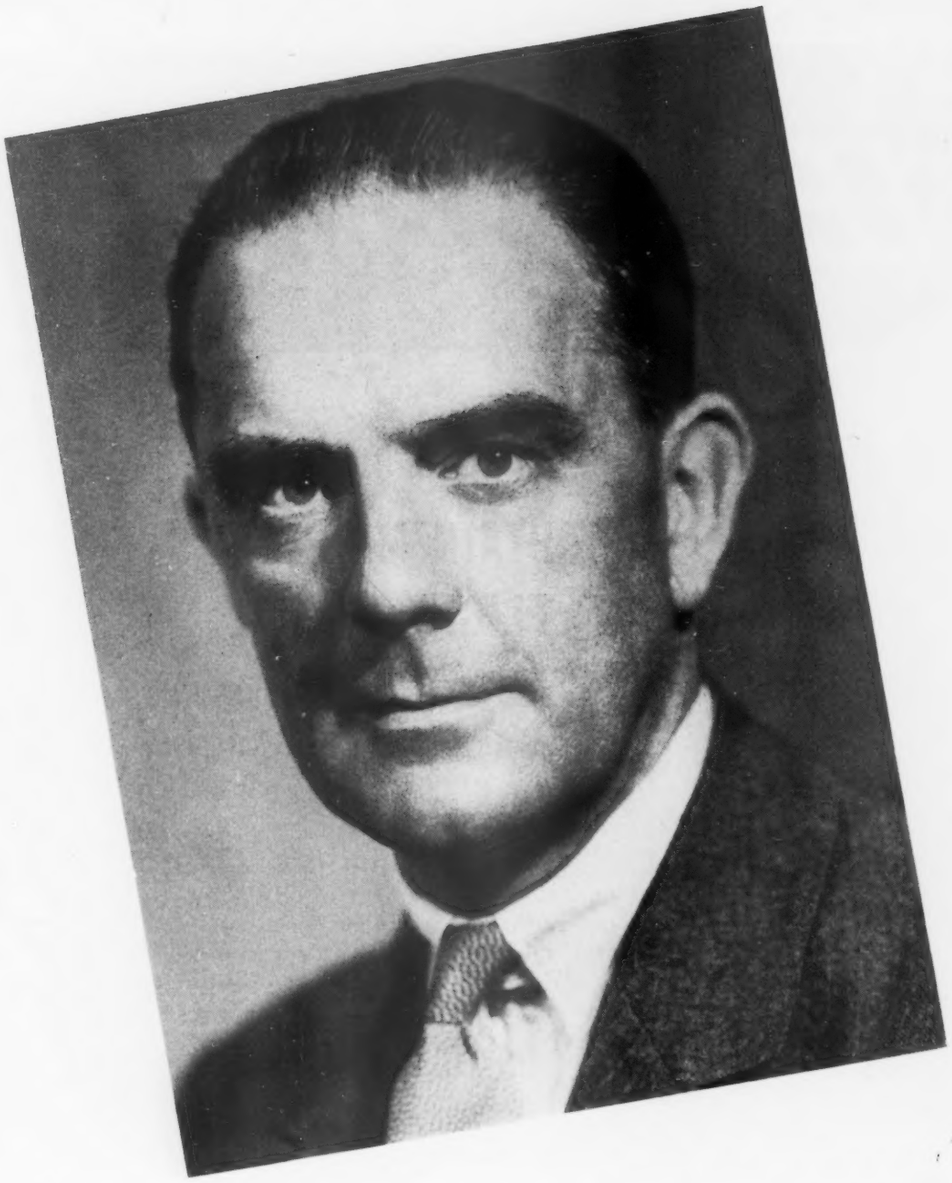

A. G. Marshall

The man who will direct the work for the coming year of the Fuels and Lubricant Activity of the Society of Automotive Engineers is A. G. Marshall of Martinez, Shell Oil Co. of California. He worked in London, shortly after the war, with the great automotive engineer, Ricardo, as research chemist and then joined the Shell interests in London. He was transferred to California in 1928 and became manager of the Technical Applications department of the company.

Born and schooled in New Zealand, Marshall went to Oxford on a Rhodes scholarship. He entered the war in 1914, served on many fronts and ended as a captain in the Royal Engineers.